DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
REGIONAL/AREA OFFICE
EXECUTIVE TOWER - 1405 CURTIS STREET
DENVER, COLORADO 80202

REGION VIII

February 12, 1979

IN REPLY REFER TO:
8HE

TO ALL INTERESTED GOVERNMENT AGENCIES, PUBLIC GROUPS AND INDIVIDUALS

The enclosed Draft Environmental Impact Statement for the Mesa (Hampden Hills) is submitted for your review and comments in accordance with the National Environmental Policy Act of 1969, Section 102(2)c.

In accordance with the procedures of the Council on Environmental Quality, the 45-day commenting period for this statement will begin February 23, 1979. Please provide your comments and questions by April 9, 1979, regarding this statement to:

Mr. Howard S. Kutzer
Environmental Officer
Department of Housing and Urban Development
Regional/Area Office
1405 Curtis Street - Executive Tower Inn
Denver, Colorado 80202

Sincerely,

For Betty Miller
Regional Administrator

Enclosure

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SUMMARY SHEET

STATUS: (XX) Draft Environmental Impact Statement ( ) Final Environmental Impact Statement

SUBJECT: The Mesa (Hampden Hills at Aurora) - A Planned Development in Aurora, Colorado

ISSUING AGENCY: Department of Housing and Urban Development
Environmental Clearance Section
HUD Area Office
Region VIII, Denver, Colorado

NAME OF ACTION: (XX) Administrative ( ) Legislative

BRIEF DESCRIPTION OF ACTION: The Alpert Corporation, the developer of Hampden Hills at Aurora, a part of The Mesa master plan, is planning to build and sell 609 single family houses and lots, 366 cluster houses, and 1,201 multi-family units. The total number of dwelling units planned for construction by Alpert Corporation is 2,176. In addition, Crane Homes, the owner of the remaining portion of The Mesa is expected to construct approximately 1,000 single family units sometime in the future. Since the application is for a portion of a master plan expected to total more than 500 units, HUD must prepare an environmental impact statement regarding the master development plan.

SUMMARY OF ENVIRONMENTAL IMPACTS AND ADVERSE EFFECTS: The development of Hampden Hills at Aurora will result in the following: Increased available housing for the middle and upper income portion of the population, disruption of the existing plant and animal communities, an increase in automobile emitted pollutants, an increased strain on sewage and all public facilities and utilities as consumed, and an increased need for public safety and educational services.

ALTERNATIVES CONSIDERED: The only alternative under consideration for which this impact statement has validity in the decision making process is whether or not the development as proposed or with recommended changes is feasible for HUD to issue mortgage insurance on individual houses.

ALL FEDERAL, STATE, AND LOCAL AGENCIES FROM WHICH COMMENTS HAVE BEEN REQUESTED:

FEDERAL

U.S. Department of Agriculture-Soil Conservation Service
U.S. Department of Agriculture-Agricultural Stabilization and Conservation Service
U.S. Army Corps of Engineers
U.S. Department of Commerce
U.S. Environmental Protection Agency
Community Services Administration
Council on Environmental Quality
U.S. Department of Energy
U.S. Geological Survey, Denver
U.S. Department of Health, Education and Welfare
U.S. Department of Housing and Urban Devleopment
U.S. Department of the Interior
U.S. Department of Labor
Mountain Plains Regional Council
National Park Service
U.S. Department of Transportation
Urban Mass Transportation Administration
Veterans Administration

STATE

Office of Planning and Land Use Planning
State Historic Preservation Officer
Colorado Division of Highways
Colorado Department of Health
State Engineer, Division of Water Resources
Department of Natural Resources, Division of Wildlife
Wildlife Conservation Officer
Department of Employment
Colorado Geological Survey
Colorado Division of Housing

REGIONAL/LOCAL

Colorado Open Space Council
League of Women Voters
Rocky Mountain Center on Environment
Regional Transportation District
Public Service Company
Denver Regional Council of Governments
Metropolitan Sewage Disposal District Number-1

REGIONAL/LOCAL CONT'D

Arapahoe County
Department of Social Services
Welfare Department

Aurora, City of
Fire Department
Mental Health Center
Department of Parks and Recreation
olice Department
Engineering Department
Department of Planning and Community Development
Utilities Department
Public Library

Cu ningham Fire Department
Cherry Creek Public Schools District
East Cherry Creek Valley Water and Sanitation District
Tri-County District Heal'' Departme

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Department of Housing and Urban Development Library
1405 Curtis Street, 27th Floor
De ver, Colorado 80202

De artment of Housing and Urban Development
HUD Area Office, 4th Floor
9 7th Street, Title Building
De er, Colorado 80202

Denver Public Library
ATTN: Government Publications Division
1357 Broadway
Denver, Colorado 80203

Aurora Public Library
1298 Peoria Street
Auro a, Colorado

INTRODUCTION

The intent of this draft environmental impact statement is to identify and evaluate the environmental consequences of constructing 3,176 dwelling units in southeast Aurora. Specifically, this statement attempts to analyze the potential impacts of the project as proposed on the existing natural, man-made, social, and cultural environments as well as the impact of each of these on the project. The conclusion reached in this inquiry will form one element of the decision making process to determine if the Department of Housing and Urban Development, (HUD), acting in the public interest, should extend mortgage insurance on homes in this development. HUD does not have jurisdiction to approve or disapprove such development; this authority of control lies with the local government.

Thus, the Department of Housing and Urban Development is circulating this Draft Environmental Impact Statement to all concerned agencies and groups to elicit comments, criticism, and technical advice or additional information which will help HUD in deciding whether or not to make available mortgage insurance on single and multi-family housing units in The Mesa development.

In preparing this statement, we have not exhaustively examined all elements of the environment; rather, we have attempted to identify and examine those elements which HUD deems important for housing developments and beneficial in making the above mentioned decision.

The first chapter describes the proposed subdivision and the existing natural, man-made, social, and cultural environments. The resulting impacts of each on the development and the development on each are examined in the second chapter. Chapter III is a brief discussion of the only alternatives for which this statement has validity in the decision making process: to insure or not to insure in the project either as proposed or with recommended modifications. Chapter IV, V, and VI are summaries of the major points to be made regarding adverse impacts, short term use versus long term productivity of the area under consideration, and the irreversible and irretrievable commitment of resources which will occur as a result of this project. The points summarized in these latter chapters are more fully discussed in Chapters I and II.

Chapter VII is reserved for letters of comment and HUD's responses in the final statement. Chapter VII presents the recommended HUD action on the proposal. These recommendations may be changed in the final statement, should the comments received so warrant.

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DESCRIPTI[illegible]ED ACTION

A. Description of the Propose[illegible]

Alpert Corporation of 3600 Sout[illegible] Aurora, Colorado has requested HUD to review their plan[illegible] deve[illegible] known as "Hampden Hills at Aurora" to determine if it is acceptable for HUD mortgage insurance on individual homes to be sold in the project.

1. LOCATION:

The location of Hampden Hills at Aurora is a part of the THE MESA; a part of Section 3, Township 5 South, Range 66 West of the Sixth Principal Meridian, Arapahoe County, City of Aurora, State of Colorado. Section 3, referred to in this statement as THE MESA, is being developed by Alpert Corporation and Crane Homes. It is bounded by East Hampden Avenue on the north, Tower Road on the west, Quincy Avenue on the south, and Himalaya Road on the east side.

Hampden Hills at Aurora, the area to be developed by Alpert Corporation will consist of 311.2 + acres. There will be 140.8 acres used for 609 single family homes, 30.5 acres for 366 single family cluster homes, [illegible]4.6 acres for 1,201 multi-family units, 37.5 acres for park and school, [illegible]0.0 acres for commercial shopping, 10.0 acres for commercial offices, and the remaining 938 acres is used up in roadways, greenbelt/floodplain, and an easement belonging to the Phillips Petroleum Company for an underground high pressure gas line.[1] Crane Homes has not yet developed detailed plans for their projected 1,000 units on their 323.8 acre site.

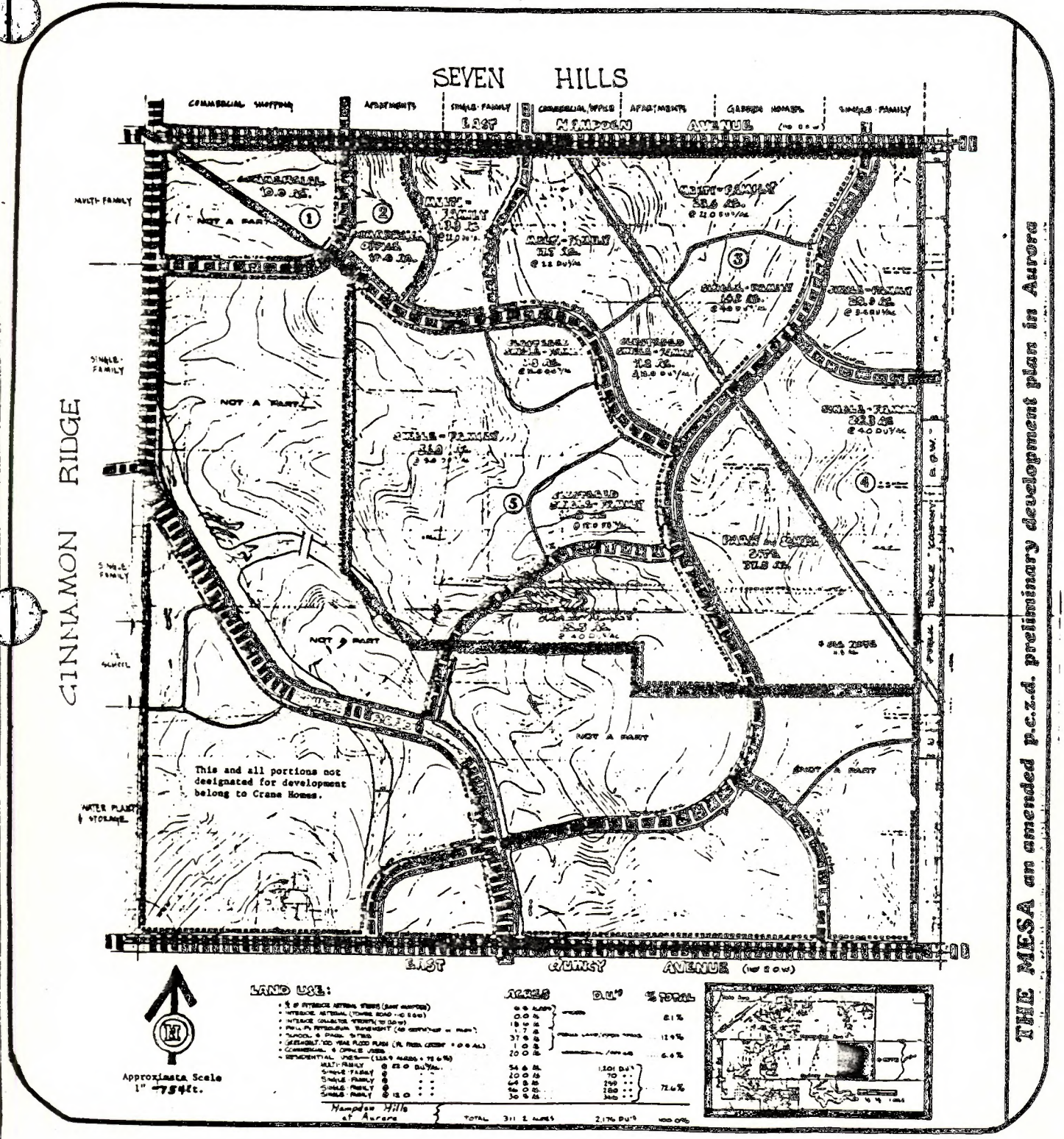
2. TYPE OF DEVELOPMENT PROPOSED:

This Planned Development will likely attract many in-migrants that are new to the Denver-Metro area, some residents of the metro region wishing to relocate, and young families wanting to purchase homes near their employment while having the conveniences of the city without living in the congestion of it. Differing housing styles can be found here; those wanting to own their own property as a single family house, a unit in cluster homes. Adjacent to the south side of Hampden Avenue there will be rental units. Using 2.9 persons as the average number per residence there will be a population of 6,310 generated from Hampden Hills at Aurora.*

2.9 persons per unit X 2,176 units - 6,310

In addition, the projected 1,000 units to be built by Crane Homes will add 2,900 residents giving a total projected population of 9,210 for The Mesa. Houses to be built will range in price from $40,000 to $70,000.

1 Alpert Corporation
* City of Aurora Plann[illegible]



THE MESA an amended p.c.d. preliminary development plan in Aurora

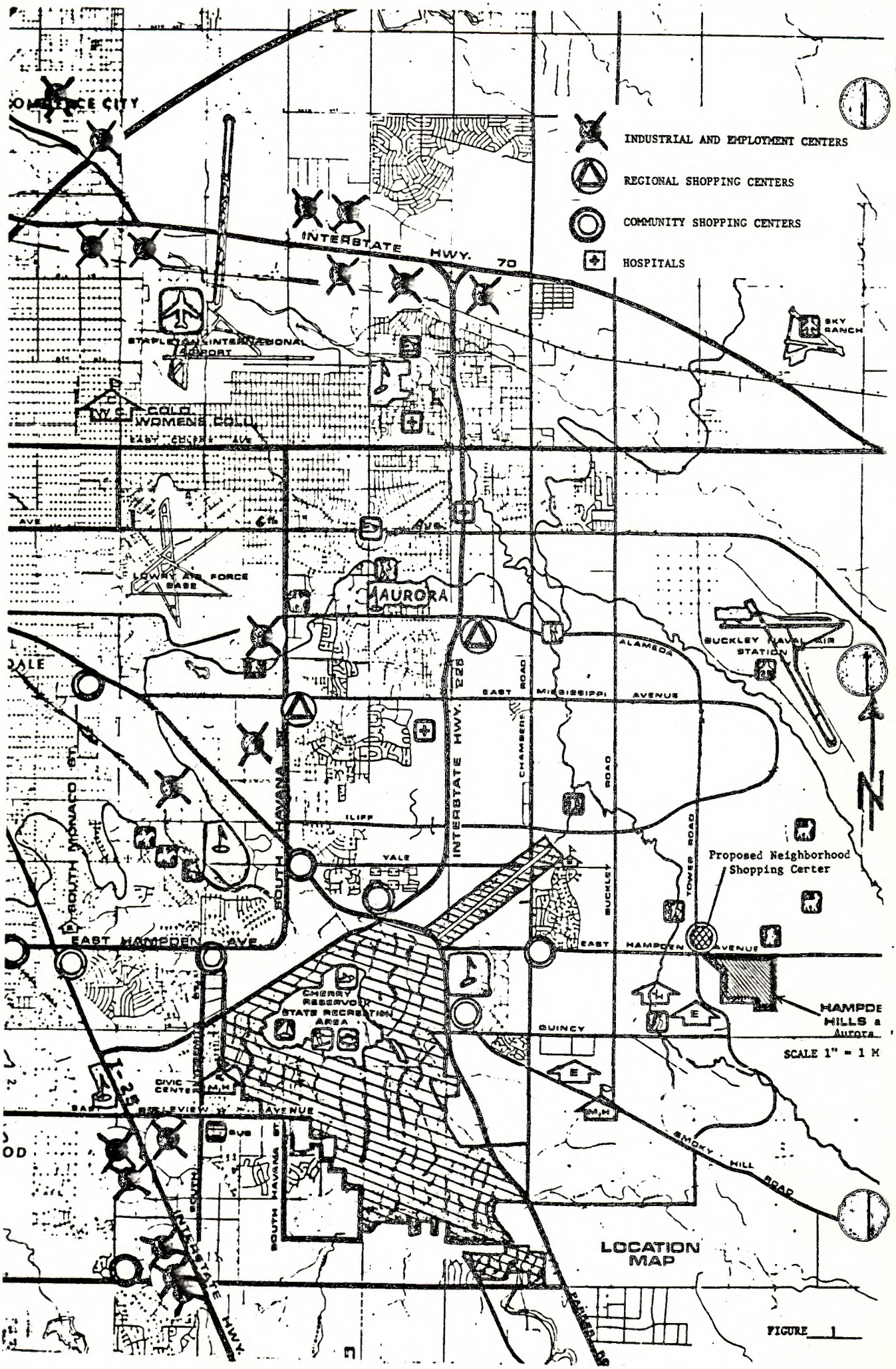

INDUSTRIAL AND EMPLOYMENT CENTERS
REGIONAL SHOPPING CENTERS
COMMUNITY SHOPPING CENTERS
HOSPITALS
INTERSTATE HWY. 70
STAPLETON INTERNATIONAL AIRPORT
SKY RANCH
LOWRY AIR FORCE BASE
AURORA
INTERSTATE HWY. 225
EAST MISSISSIPPI AVENUE
ALAMEDA
BUCKLEY AIR FORCE STATION
CHAMBERS ROAD
TOWER ROAD
BUCKLEY
ILIFF
YALE
SOUTH HAVANA ST.
SOUTH MONACO ST.
EAST HAMPDEN AVE.
Proposed Neighborhood Shopping Center
EAST HAMPDEN AVENUE
CHERRY RESERVOIR STATE RECREATION AREA
HAMPDEN HILLS a Aurora
QUINCY
SCALE 1" = 1 M
CIVIC CENTER
I-25
SOUTH HAVANA ST.
INTERSTATE HWY.
SMOKY HILL ROAD
LOCATION MAP

FIGURE 1

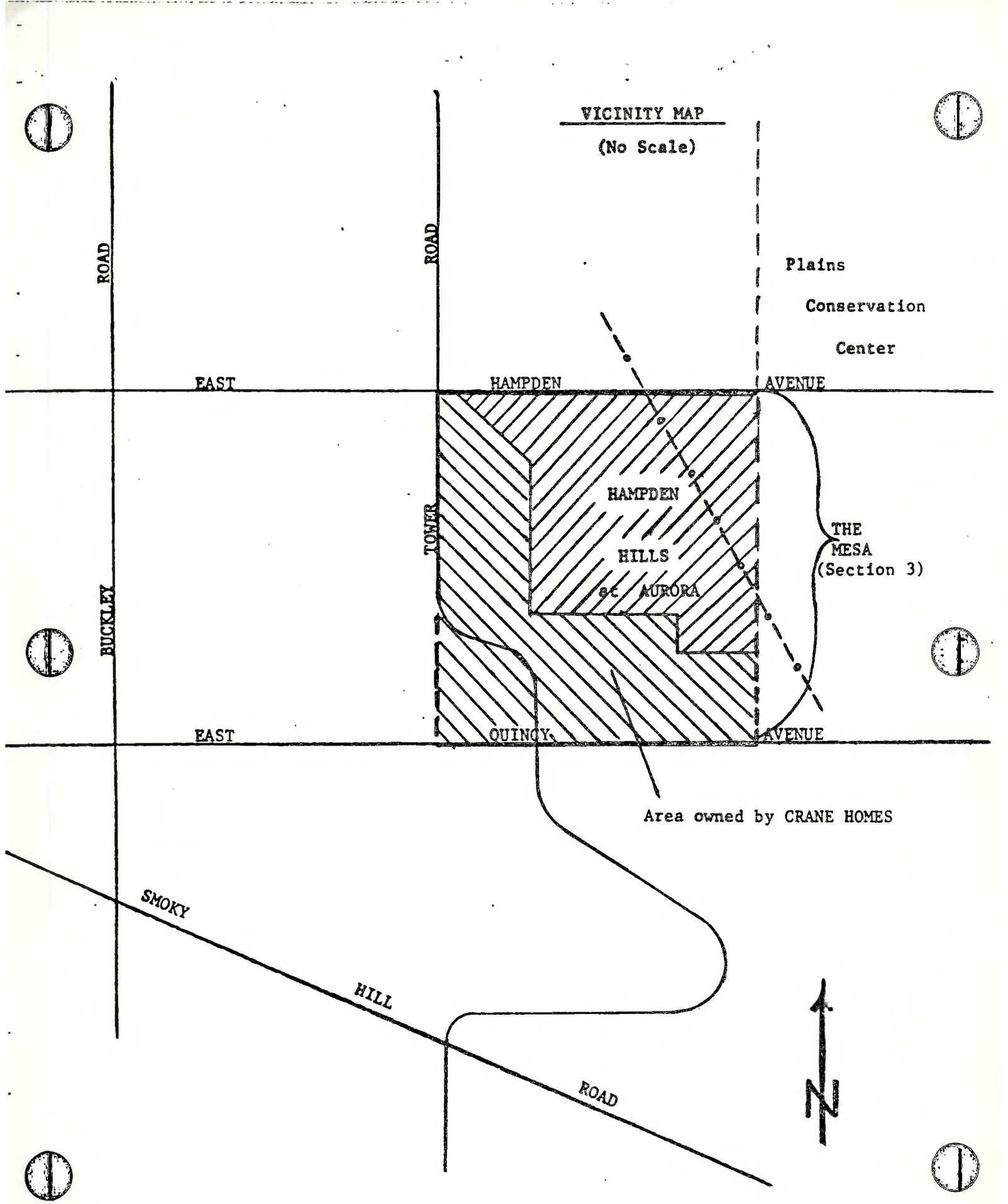


FIGURE 2

PHILLIPS PETROLEUM GAS LINE ——•

B. History of the Development

The Preliminary Map of Hampden Hills at Aurora development was first submitted to and approved by the City of Aurora's Planning Director on September 27, 1977. The Mayor of Aurora also approved the development as planned on the same date. Timetable sequence for the development is as shown below:

1. Grading began on January 27, 1978.

2. Sewer lines were installed in March, 1978 or soon thereafter.

3. Water lines were installed in April, 1978.

4. Electrical lines were placed in April, 1978.

5. House construction began on June 6, 1978.

6. Date for curb and gutter installation was in the middle of August, 1978.

7. Commencement of gas line installation began in mid September, 1978.

8. Paving of streets began October 4, 1978.

9. Model homes were completed October 15, 1978.

C. Natural Environment

1. CLIMATE:

The Aurora area enjoys a semi-arid climate with days that are generally mild and sunny. Since Aurora is not near any moisture sources, but often has the presence of afternoon clouds, extremely hot or humid days are nearly non-existent. Cold weather months from December through March experience temperate conditions due to the region's high elevation and still higher mountains to the west. Masses of cold air from Canada that spread eastward over the plains to the east of Denver are usually too shallow to adversely affect the mile-high Denver Metropolitan area. Cold air as it descends over the eastern slopes of the Rockies often results in chinook conditions that are warmer than the usual for this latitude and location during the cold season.

Although the Aurora area has a low annual total precipitation, flooding locally can occur due to thundershowers that can drop large amounts of rain within short time spans. Dangers of possible flooding increase as does the volume of runoff caused by the continual expansion of urbanization. The months of greatest precipitation are in the spring season from April through July. Heavy and wet snows as well as heavy rains are then at their maximum.

Throughout the year the average daily temperature range is about 28 to 30 degrees Fahrenheit. A significant factor of the area's temperature is the mean annual temperatures of 50.2 degrees and the usual absence of days with extremely hot or cold conditions. Past records indicate that the mean temperatures for the months of June, July, and August exceed 65 degrees. Temperatures during the cold may touch below freezing for several months. A wide range of temperatures can be expected during the cold season. Typically the mornings will be sunny and clear. Formation of clouds is common in the afternoons. In the summer these clouds hold the temperature down on what would otherwise be a hot day. The presence of sunshine has a strong effect on the enjoyment of Aurora's weather. A dominant number of clear days occur in the fall and winter, which adds pleasantness to what would normally be colder parts of the year.

Winds in the Aurora area come generally from the south and southwest, this wind pattern holds true throughout the year. Few other significant winds blow in Aurora, except for those occasional north winds that bring rapid drops in temperature and generally stormy weather.

The Denver region is favored with an exceptionally clear day-by-day climate. From the National Weather Bureau finds there are on the average 115 clear days, 115 cloudy days, and 135 partly cloudy days annually. (SOURCE: National Weather Bureau; Aurora Planning Department).

2. GEOMORPHOLOGY, GEOLOGY AND SOILS

The land surface of Hampden Hills at Aurora County is gently rolling with the elevation declining from the south to the north. The elevation varies 140 feet from a high of 5,790 feet near the south edge to a low of 5,650 feet near the northwest corner. See FIGURES 3-4. Geologically the site is predominated by layers of Castle Rock conglomerate, shale, clay, siltstone, beds of conglomerate, and sandstone. There are also some deposits of Post Piney Creek Alluvium, sand, gravel, silt, and clay (stream deposited). Further examination of the surficial geology types gives the location of the alluvial aquifier surrounding and paralleling the drainage.

a. Geologic Hazards

This planned subdivision is within the Denver Basin, a tectonic depression formed during the Cretaceous Period. Basement strata, here is a sequence of sands, silts, and clays named the Denver-Arapahoe Formation, normally flat lying and undeformed. Several potentially hazardous geologic conditions exist here. The swelling soils, compacting soils, and the perched ground water levels could adversely affect houses built in this area. These conditions can be minimized or corrected by proper planning, drainage, and design by a licensed engineer. Increased runoff from the ground cover caused by this development will mean a loss in recharge, however, lawn irrigation should compensate for this loss and even increase recharge.

b. Seismicity

No major quaternary tectonic features are recognized in this subject area. Seismic activity is thought to be similar to the general pattern of activity to the west along the foothills of the Front Range, there readings have been as high as an intensity of VII on the Modified Mercalli Scale. (See Appendix A).

FIGURE 3

SOILS - VICINITY MAP of THE MESA (Hampden Hills at Aurora)

ALTITUDE - TOPOGRAPHY of THE MESA (Section 3), Arapahoe County, Colorado

FIGURE 4

c. Mineral Deposit

Within 250 feet of the surface of this site is a 5-10 foot seam of low quality lignite coal. This deposit is very insignificant and should not cause any concern or delay in development of this housing subdivision. (Telephone conversation: Paul Soister, Geologist, U.S. Geological Survey, August 3, 1978).

d. Radiation

There is not any hazard due to radiation in this area of Arapahoe County. Only natural background conditions as exist in Colorado can be found here. (Telephone conversation: Al Hazel, Director of Radiation and Hazardous Materials, Colorado State Health Department, December 27, 1977).

3. FLOODING

This entire subdivision lies within the Toll Gate Creek Basin. Figure 5 shows the location of The Mesa in relation to this Basin.

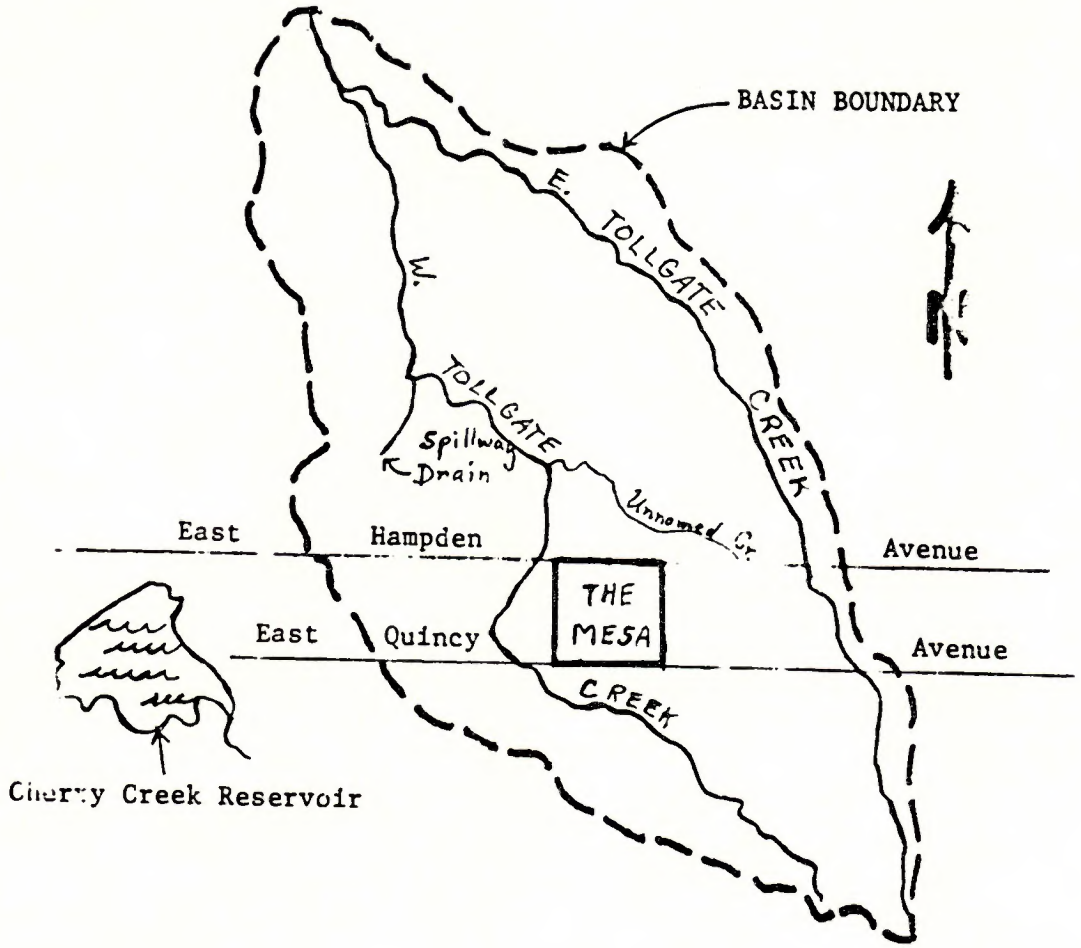
The drainages from the development site and those in the vicinity flow generally in a northeasterly direction. Elevation here is higher than the surrounding land so that drainage from storms should not cause flooding concerns within the development.

Tri-Consultants, Inc., completed their Preliminary Drainage Plan of The Mesa on August 24, 1977. This plan indicates adequate drainage for the development and was approved by Stephen B. Reams, State of Colorado Engineer.

There are not any defined flood plains on this site's location. (Bill De Groot, Chief, Flood Plain Management Program, Letter: November 28, 1977, Appendix C).

4. PLANT AND ANIMAL COMMUNITIES:

The location of this project is at the east edge of a traditional migration route for mule deer. This is not anticipated to affect an impact on the migration of the deer. Hampden Hills at Aurora will have an effect on the mule deer population in the area.



TOLL GATE CREEK

BASIN MAP

U.S. ARMY ENGINEER DISTRICT, OMAHA
CORPS OF ENGINEERS OMAHA, NEBRASKA
JUNE 1973

(No Scale)

FIGURE 5

Domestic free-roaming dogs, now troublesome in molesting livestock, will pose an even bigger problem to any wildlife in the area. Ranching of livestock near housing developments has decreased markedly, this change will cause a shift by marauding dogs to hunt native prey, including deer. A dog-tight fence and an enforced leash ordinance are recommended as control measures to be implemented by the Colorado Division of Wildlife.

Songbirds, raptors, and rodents will be forced to relocate. As the rodents move to different places so will the raptors that depend on them as their source of food.

The vegetation in section 3 of Arapahoe County is mostly wheat stubble and summer fallow. 1963 photos of the area, indicate that it has been farmed since that year. The SE 1/4 of section 3 and a portion in the middle of the W 1/2 of section 3 is still in native vegetation. This vegetation consists of:

Grasses	Forbs and Shrubs
Western Wheat	Kochia
Bluegrama	Prickly Pear Cactus
Buffalo Grass	Yucca (Soapweed Yucca)
Three-awn	Annual Sunflower
Cheatgrass	Wolly Indian Wheat
Sand/dropseed	Hairy Gold Aster
Needle & Thread	Russian Thistle
Kentucky Blue Grass	Bull Thistle
Little Bluestem	Wavy Leaf Thistle
Side-oats grama	Prickly Poppy
Sun sedge	Sticklead Mentzelia
	Bush Buckwheat
	Western Ragweed
	Fringed Sage

There are no endangered species on the proposed development site.

Nuisance plants include Russian and Wavy Leaf Thistle, but these occur so infrequently that they present no problem.

5. NATURAL HAZARDS

No natural hazards are known to exist in this area of southeast Aurora.

D. Man-Made Environment

1. WATER SUPPLY:

The Mesa (Hampden Hills at Aurora) project will receive its water from the Aurora water supply system. Aurora has its own water supply, storage, and treatment systems. The Kuiper treatment plant first completed in 1967 with a capacity for treating 20 MGD (Million Gallons Daily) is located at 14201 East Hampden Avenue. In 1972 this facility was doubled in size with an additional treatment capacity of another 20 MGD. Because of Aurora's recent rapid growth this treatment plant's capacity was again increased in 1977. This expansion for 30 MGD more has now made a total treatment capacity available for 70 MGD.

Raw water is treated here through the use of fourteen Mixed Media Filter Beds. Each one has a capacity of 5 MGD. These large filter beds consist of five layers of different materials each with varied filtering capabilities from the others. Anthracite coal that has been pulverized is used as the first stage in the filtering process. Below this coal layer is a layer of silica sand followed by garnet sand and garnet gravel support media. The average daily flow through this treatment plant now is 30 MGD. A peak flow of about 50 MGD may be experienced during the warmer summer months. (Bud Hart, Plant Manager, Kuiper Treatment Plant, Interview on Janaury 4, 1978).

Water sources that give a constant adequate supply to Aurora are as follows:

1. Diversion from the South Platte River.
2. Well fields on Cherry Creek.
3. Numerous water rights from various suppliers.
4. Water from the Homestake Project.

The Homestake Water Project was brought into existence through the combined efforts of Aurora and Colorado Springs. Water for this project comes mainly from the Homestake Creek drainage basin on the western slope near Gilman, Colorado. It is carried through the Homestake Tunnel to the eastern slope and into Turquoise Lake west of Leadville. From here the water flows via natural rivers, ditches, conduits, pumping facilities, and tunnels to the South Platte River and Aurora. This diversion carries the water 180 miles and provides approximately 6 billion gallons annually for Aurora. (The Denver Post, June 8, 1975).

Total annual yield in 1975 from the above mentioned sources was near 7,915 million gallons. Water in the amount of 1,303 million gallons is available from shallow wells when needed. An additional 5,624 million gallons of surface water per year has been purchased or is under contract from small water owners and will be available within five years. An enlargement of the Homestake Project expected to be completed in 1983 or later when the water will be needed, should also add 6,416 million gallons per year.

Sufficient water is available for constant operations of the Kuiper Treatment Plant from the three storage sources. Quincy Reservoir and Rampart Reservoir each can furnish 35 MGD and two storage tanks along Smoky Hill Road have the capacity of 4 MGD each. When these storage sources run low more water is diverted into them for refilling. (Charles Wemlinger, Director of Utilities, Interview: November 14, 1977).

The average person in Aurora uses approximately 125 gallons of water per day and an 80 gallons per day flow of waste water. (Telephone conversation: Tom Griswold, Water Resources Engineer, January 6, 1978). When all 3,176 living units of this development are completed and occupied the additional daily water usage generated from this project would be 1,999,050 gallons or 1.9 MGD. The total of 3,176 living units x 2.9 persons per unit = 9,210 Total population. This 9,210 total x 205 gallons per person = 1,888,050 gallons daily.

2. SEWERAGE

Sewage from The Mesa (Hampden Hills at Aurora) will travel through the Toll Gate Interceptor to the Sand Creek Interceptor. Flow of sewage then goes directly to the MDSDD (Metro Denver Sewage Disposal District) Plant #1 located at 6450 York Street. This plant treats an average daily flow of 120 MGD (Million Gallons Daily) and has a capacity capable of treating 168.5 MGD daily. (Telephone conversation: Bob Genty, Inspector, Janaury 6, 1978).

The plant is currently treating entirely by gravity flow and receives and treats sewage from 21 member governmental bodies within the Denver Metro area with a 1975 service area population of 1,040,000.

Waste water flow per person in Aurora averages 80 gallons a day. Using that average there would be .74 MGD flow generated from the developemnt with a population of 9,210.

3. SOLID WASTE DISPOSAL

The solid waste from this development will be taken care of by private contractors. Refuse is hauled to the Lowry Bombing Range Landfill site located on Sixth Avenue eight miles east of Buckley.

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The plant is currently treating entirely by gravity flow and receives and treats sewage from 21 member governmental bodies within the Denver Metro area with a 1975 service area population of 1,040,000.

Waste water flow per person in Aurora averages 80 gallons a day. Using that average there would be .74 MGD flow generated from the developemnt with a population of 9,210.

3. SOLID WASTE DISPOSAL

The solid waste from this development will be taken care of by private contractors. Refuse is hauled to the Lowry Bombing Range Landfill site located on Sixth Avenue eight miles east of Buckley.

electricity will each be provided by the Public Service Company of Colorado (PSC). At present, the existing supply of natural gas is insufficient to meet the demands of new housing and may well remain so. (Bryden, March 1975, and U.S. Department of Interior, February 1975).

In order to determine who receives allocations for gas taps on new construction, PSC has instituted a reservation system for new gas taps. A developer must use committed gas taps within one year, or else forfeit part of the original gas deposit and the commitment. A developer may, however, transfer a committed gas tap once among any of the projects under development. Alpert Corporation has 400 affirmative gas taps and about 1,200 applications on the waiting list for gas allocations. No all electric units are being planned. (Leland Alpert, Vice President of Alpert Corporation, by telephone conversation on June 5, 1978).

According to Darrell Morehead of PSC in a telephone interview on January 19, 1978 it was learned that gas tap allocations in this area are received after about one year's time on the waiting list after original application. The waiting time from original application to the allocation for gas is continually increasing.

As gas becomes more and more expensive and scarce electricity and solar energy will play an increasingly greater role in the area.

7. NOISE

Based on external exposure to noise, HUD has adopted a policy regarding three major noise sources; (1) motor vehicles, (2) aircraft, and (3) railways. Noise exposure levels are considered on these factors; (1) traffic volume, speed, and distance; (2) proximity to airports and (3) railroad operations.

This policy places the severity of noise exposure to the site as follows:

> CLEARLY ACCEPTABLE -- The noise exposure is such that both the indoor and outdoor environments are pleasant.
>
> NORMALLY ACCEPTABLE -- The noise exposure is great enough to be of some concern, but common building construction, sleeping quarters, and the outdoor environment will be reasonably pleasant for recreation and play.
>
> NORMALLY UNACCEPTABLE -- The noise exposure is significantly more severe so that unusual and costly building constructions are necessary to ensure some tranquility indoors and barriers must be erected between the site and prominent noise sources to make the outdoor environment tolerable.

CLEARLY UNACCEPTABLE -- The noise exposure at the site is so severe that the construction costs to make the indoor environment acceptable would be prohibitive and the outdoor environment would still be intolerable.

The major traffic noise source to be of some concern is East Hampden Avenue. This road as far east as beyond Tower Road has very light traffic now of about 400-500 ADT (Average Daily Traffic). As growth occurs in this vicinity the ADT will do likewise. Projected traffic for the year 2000 is 14,000 for Tower Road and 12,000 ADT for a 24 hour period for East Hampden Avenue. The speed limit here is 40 MPH. (Ted Denisuk, Engineering Assistant, Telephone conversation on March 21. 1978). The nearest single-family residential site in the project area is approximately 975 feet from Hampden Avenue, which is easily within the CLEARLY ACCEPTABLE zone. See FIGURE 6. Multi-family residential sites planned for future development will be adjacent to Hampden Avenue and will therefore have a much greater noise problem. Minimum set back distances from Hampden Avenue and Tower Road are 105 feet and 130 feet respectively as shown on FIGURE 6).

The Mesa (Hampden Hills at Aurora) in Section 3, Township 5 South, and Range 66 West is approximately 4 miles from Buckley Field, the nearest airfield, Arapahoe County Airport is within 8 miles southwest of The Mesa, Columbine Airport is about 10 miles to the northeast, and Stapleton International Airport is approximately 12 miles northwest of this site.

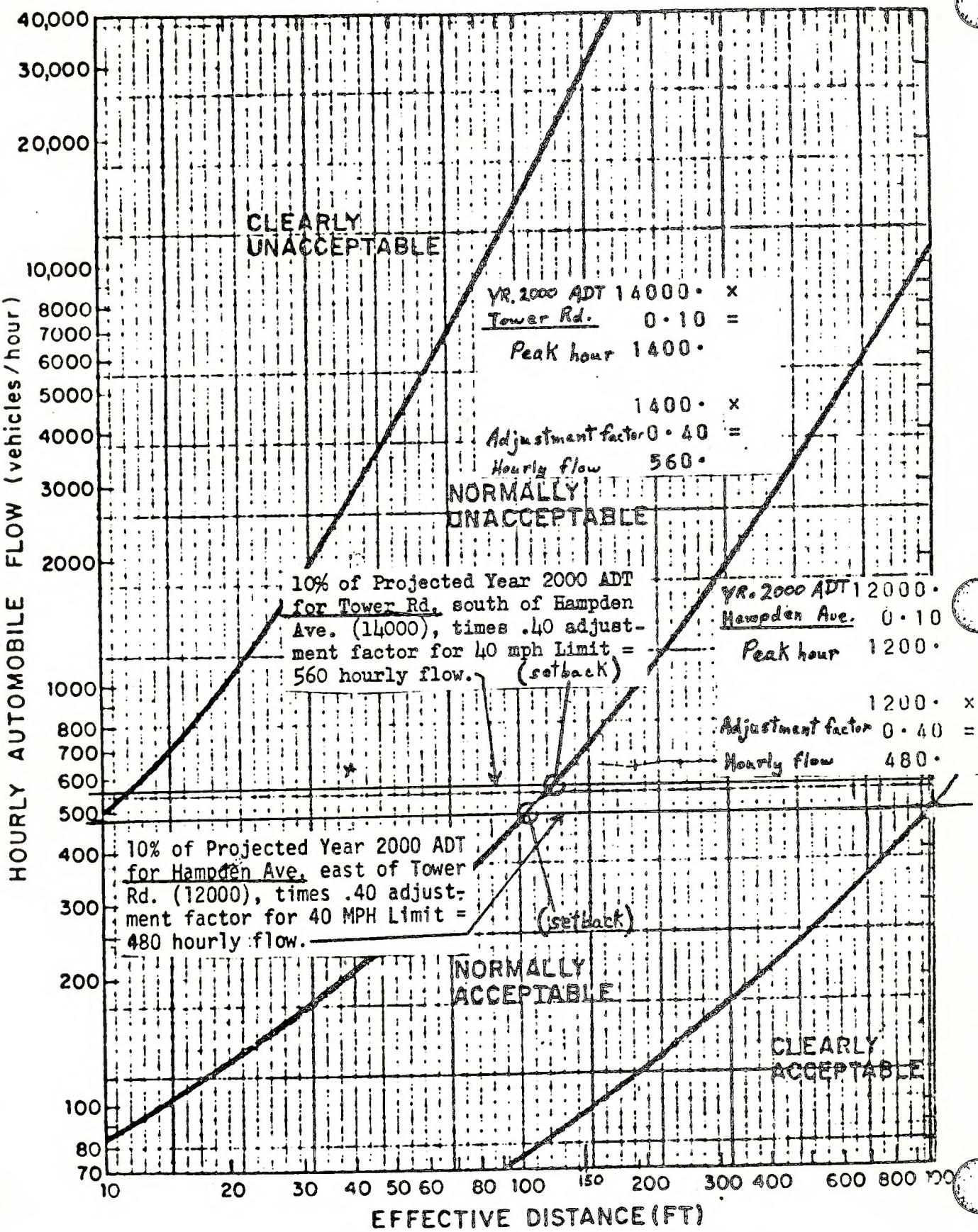
The Mesa (Hampden Hills at Aurora) is clearly acceptable in relation to all nearby airports. See FIGURE 7.

The only railway which might be considered to affect The Mesa (Hampden Hills at Aurora) is about seven miles north of the site. The location is distant enough from this nearest railway, Union Pacific, to be considered clearly acceptable as determined by the "Noise Assessment Guidelines".

8. AIR QUALITY

Aurora's location on the east edge of the Denver metropolitan area means a lower concentration of the air pollution problem. Two reasons supporting this statement are; (1) typical seasonal winds that come generally from the south and southwest blowing pollutants away from Aurora and (2) few major traffic roads and pollution causing industries exist here. Especially in the southeast corner of Aurora where this development is planned. This vicinity of Aurora is so far from the hub of the Denver-Metro area that air pollution does not now seem to be a problem of concern. (Scott Miller, Public Health Engineer, Colorado State Health Department, Telephone conversation: March 21, 1978).

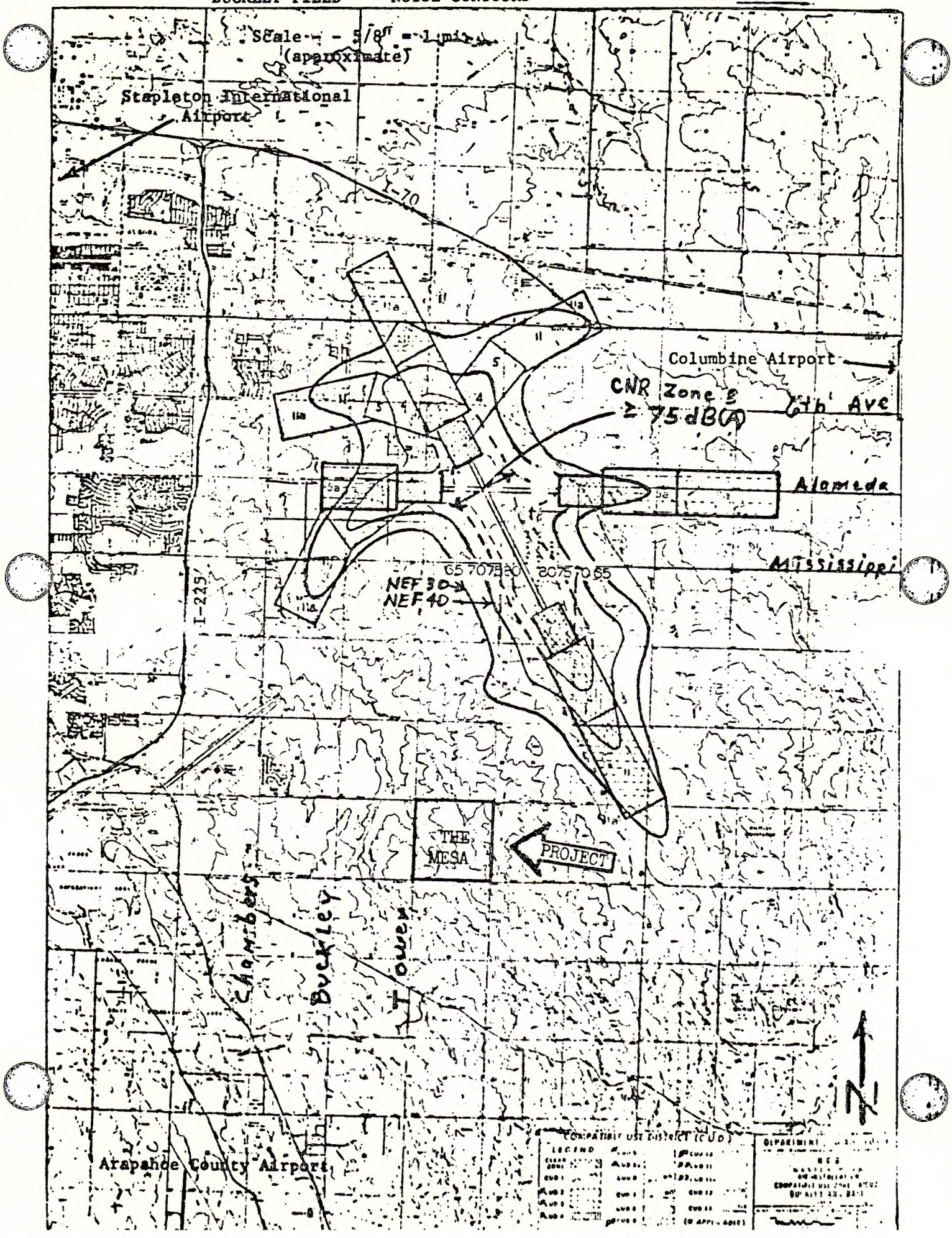
NOISE ANALYSIS -- THE MESA (Hampden Hills at Aurora)



EFFECTIVE DISTANCE for residences must be 130' from Tower Rd. and 105' from Hampden Ave. to be within the "NORMALLY ACCEPTABLE" category.

Figure 6

BUCKLEY FIELD - - NOISE CONTOURS FIGURE 1



Although since this region has been growing and will continue to experience rapid growth in population, it can be assumed that air pollution will likewise increase. When Hampden Hills at Aurora is completed it will have a total of 2,176 dwelling units in it. Vehicle miles traveled (VMT) daily because of this project will be 174,080. In addition to this VMT created by the Hampden Hills at Aurora project there will also be 1,000 homes built on The Mesa by Crane Homes. (Telephone conversation: Roger Hickok, Vice President-Marketing, Crane Homes on January 25, 1978). A total VMT of 254,080 can be expected when The Mesa is completed as planned.

The method used to derive the VMT is as follows: Multiply the number of dwelling units times 10 trips a day times 8 miles per trip equals VMT. (Environmental Quality Division, HUD Regional Office). Vehicle trips caused by the dwelling units of a development include emergency, delivery, and all service vehicles making trips to the area as well as many private passenger vehicles which we rely on.

Weather Effects on Air Pollution

The Denver metro area often experiences temperature inversions in the colder seasons of the year. Temperature inversions play an important role in air pollution. They are caused by the fact that instead of cooling with an increase in height the air warms which is the opposite of or inverted from the normal. This warmer air prevents the pollutants from rising very far into the air since the layer of warm air is trapped near the surface by the colder outer atmosphere. When an inversion persists through the day, stagnation of the air near the ground worsens with impurities. Low level winds determine how quickly the stale air is replaced horizontally. A wind of 4 miles per hour will usually clear Denver's air in two hours or less. There is a notable seasonal as well as daily difference in air quality over the metro area. Summers here have much cleaner air than the winters, when the 'smog season' occurs.

9. MAN-MADE HAZARDS

There is an energy related man-made hazard within the property boundaries of Hampden Hills at Aurora. A high pressure liquified natural gas line crosses beneath the developments' northeast corner. This pipeline owned by the Phillips Petroleum Company transports liquefied natural gas from Douglas, Wyoming to Borger, Texas. See FIGURE 2 for location of this gas line. Chapter VIII contains HUD's requirements concerning liquid petroleum pipelines.

E. Social Environment

1. DEMOGRAPHY

Results from a recent report by Aurora's Planning Office show that the average household size dropped from 3.19 persons per household in 1970 to 3.05 persons per household in 1974. Aurora's smaller average household size has resulted from decreases in children per family and an increase in single person households. The area of Aurora south of Hampden where this project is planned has recently been experiencing rapid growth. This vicinity is attracting many young families with children. Most recently 2.9 persons per household is used for Aurora. (Nicki Stoner, Planner, Telephone conversation on June 1, 1978). A study made in July 1977 show[illegible] population of 8,100 living south of Hampden Avenue in Auror[illegible] population of Aurora at this time was 137,000. (Telephone c[illegible]ation: Nicki Stoner, Planner, February 6, 1978). Presently, Aurora absorbs about 16 percent of the growth in the 'Metro Area'. In-migration is particularly significant when one considers that two thirds of the population increase experienced by all suburbs in the Denver-Standard Metropolitan Statistical Area (SMSA) for the last decade was due to in-migration. In 1970-1974, 21.2 percent of these in-migrants had come from the City and County of Denver, a significant increase from a study of in-migrants done in 1965-1970.

Results of this Aurora survey also reveal that the city is predominately an Anglo community. The total white population is 94.5 percent of the total, while non-whites comprise 5.5 percent of Aurora's residents. See TABLE 1

TABLE 1

Racial Composition 1974

Anglo	94.5%
Black	1.9%
Mexican-American	1.6%
Oriental	.6%
Indian	.5%
Other	.9%
	100.0%

Source: 1974 Household Survey

Age distribution during the last 4-5 years has been shifting to a slightly older population. Aurora's median age was one and a half years younger than that of the SMSA in 1970 and four years younger than the nation's median. The median age has risen from 23.7 years in 1970 to 26.0 years in 1974. This changing age distribution follows the trend toward the average household size. The decrease in

number of children per family explains the increase in the median age.

Aurora's percentage of elderly 65 and over is increasing slightly, but does remain a stable segment of the population. After retirement many elderly continue their residency here.

Aurora's population is slightly better educated than that of other communities in the region, state, and nation. Approximately 75 percent of all Aurorans over age 25 have completed high school, compared to 50 percent in the nation. Of these people, 13.3 percent have completed four or more years of college, compared with 11.0 percent of the U.S. population. Twenty-three percent of Aurorans have completed three years or less of high school, compared to 44.8 percent of those in the U.S.

In 1970, the average family income for Aurora was $10,554. The Aurora Department of Planning and Community Development estimates that the average income in 1975 was $14,000 per year. Aurora's median income lies between that of Denver and higher income communities such as Boulder and Lakewood. Figures for 1970 (Aurora Department of Planning and Community Development, 1973) indicate that 80 percent of Aurora's families earn between $6,000 and $24,999, with few families earning either low or high incomes; 16.9 percent of all Aurora families earn less than $6,000 a year, compared to 18.8 percent of the families in the Denver SMSA; and only 3.1 percent earn $25,000 or more compared to 5.5 percent of the Denver SMSA. Approximately 62 percent of Aurora's labor force holds white collar jobs; of these, 28 percent are professional and technical, 14 percent are administrators and managers, 14 percent are sales workers, and 44 percent are clerical. Nearly 25 percent of the work force is composed of blue collar workers; of these 49 percent are craftsmen and foremen, 37 percent are operatives and 14 percent are laborers. The remaining 13 percent of the work force is categorized as service workers and other. (Aurora Department of Planning and Community Development, 1973). Aurora is shown as a middle-income city by the 1970 and 1974 income distributions. Income homogeneity is illustrated by the small percentages of poor and rich in the city as shown in TABLE 5.

2. HOUSING

Housing need in Aurora, as shown by the vacancy rate, has returned to a high enough level of demand that new housing construction has been encouraged. Aurorans are predominately single-family homeowners, although there has been a noted increase in the percentage of residents in multi-family dwellings.

More than half (55.2 percent) of Aurora's existing housing and 80 percent of all new housing construction is single-family detached. Single-family attached housing accounts for 14.4 percent of all housing in Aurora. Construction has been minimal for single family attached housing. Townhouses built in the early seventies construction boom are gradually being absorbed. Multi-family units are 25.1 percent of Aurora's housing supply. Demand for apartments is beginning to balance the over supply. The vacancy rate for apartments is decreasing slower than the vacancy rates of townhouses. Multi-family vacancy rate is 8.6 percent as compared to 22.9 percent in October, 1974. Mobile homes account for 5.2 percent of the housing in Aurora. TABLE 4 shows housing percentages by types while TABLE 3 gives the age of housing.

3. ECONOMY AND EMPLOYMENT

There is extensive cross commuting in the Aurora area by Aurora residents who work outside of the city as well as many who do not live there, but come into Aurora for their employment. The Aurora Planning Office reports that "66.4 percent of the city's population commuted to out-of-town jobs in 1970 and 68.4 percent in 1974". Approximately 38,000 workers leave the city each day for work in Denver, which remains the most common place of employment. Of those leaving Aurora, 83.9 percent are going to the City and County of Denver.

One of the main characteristics of Aurora's labor force is its strong relationship with the military. This results from Aurora's proximity to Lowry Air Force Base and the Rocky Mountain Arsenal, and inclusion of Fitzsimons Army Hospital and Buckley Air National Guard Base. Half of all the military personnel in the Denver region live in Aurora. This amounts to 19 percent of all Aurora residents in the labor force and 30 percent of all Aurora males 16 years and older. In addition, about 13 percent of all civilian workers in the city are employed by the military, Fitzsimons Army Hospital being the largest single employer of civilians in Aurora. All of these government facilities are within a 15 to 30 minute radius from this development.

AGE OF HOUSING STOCK

TABLE 2

Years	1974 Household Survey (occupied units)	1974 Staff Estimate (total units)
1970-74	45.2%	45.9%
1960-69	25.5%	25.3%
1950-59	22.8%	21.7%
1940-49	5.0%	5.0%
1939 or earlier	1.5%	2.1%
	100.0%	100.0%

Source: Aurora Planning Department estimate - 1974 Household Survey

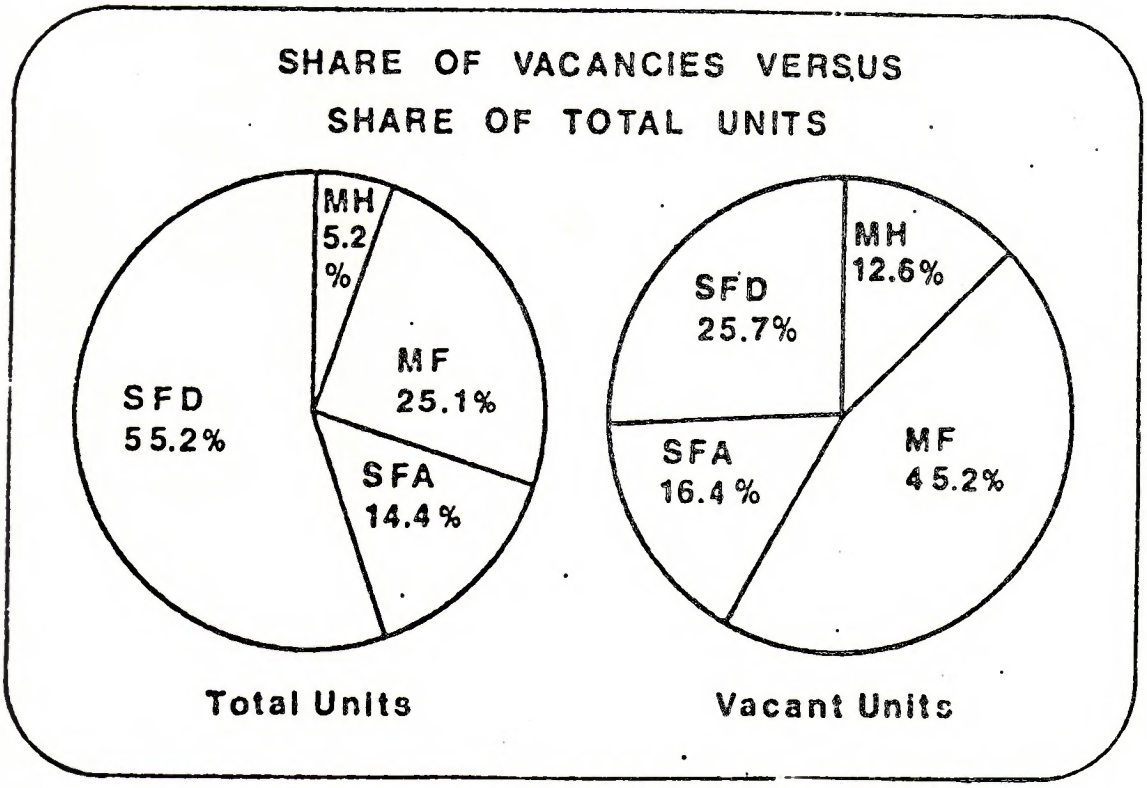
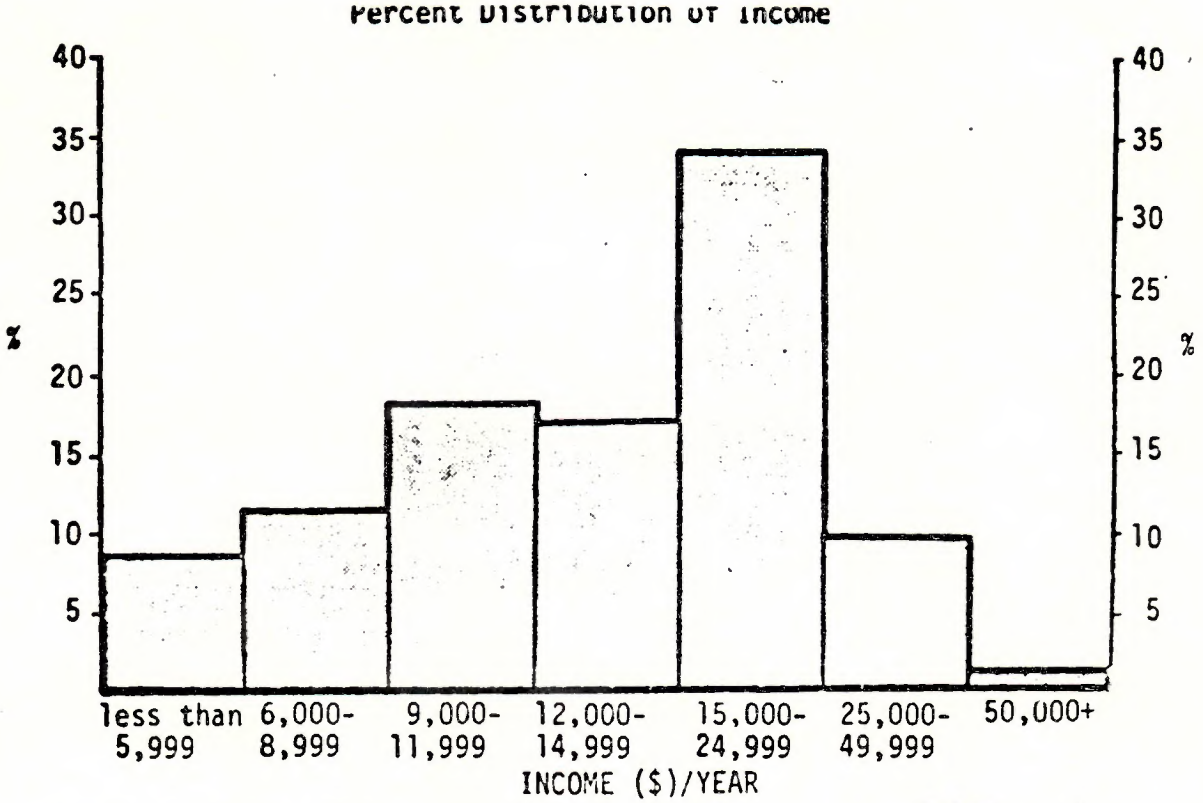


TABLE 3

Source: City of Aurora Housing Market and Population Estimates, 1977.



Source: Aurora Planning Department

TABLE 4

4. EDUCATION

Cherry Creek Schools will provide educational services to the children of Hampden Hills at Aurora residents. Children attending grades K-6 will attend Arrowhead Elementary School located at 19100 East Bates Avenue in Aurora. This school is in Seven Hills to the north of Hampden Hills at Aurora. This recently opened new school has a capacity for 599 pupils with an enrollment of 216 as of April 1, 1978. Junior high aged students will enroll at Laredo Middle School where the enrollment is 435 and capacity of 1,000. Smoky Hill High School will be serving students in grades 9-12. Capacity of this school is 2,250 and enrollment is 2,328 as of April 1, 1978. The district's schools operate on a year around scheduling basis with student to teacher ratios as follows: elementary schools 27/1, middle schools 25/1, and high schools 24/1. Difficulty is felt in this district providing adequate schools and staff to keep pace with the rapidly expanding region. (Thomas S. Crawford, Assistant Superintendent, Letter: December 9, 1977).

Higher Education in the Denver metro area available to residents of Hampden Hills at Aurora includes ten colleges and universities. Two year colleges include Community College of Denver with three campuses and Arapahoe Junior College. Four year colleges are Metropolitan State College, Colorado School of Mines, and the University of Colorado. Private colleges and universities include Loretta Heights College, Regis College, Colorado Women's College, and Denver University. There are also several theological seminaries and technical colleges as well as many business and trade schools. The U.S. Airforce Academy is near Colorado Springs, approximately 63 miles south of Denver.

Refer to Tables 5 and 6 and Figures 8 and 9 for additional data and location information concerning public schools and higher education facilities.

Aurora's economy is heavily dependent upon the presence of military facilities; however, the military employment centers pay no taxes to the city. Much of the disposable income of military personnel and their families is spent in commissaries and exchanges, all of which are exempt from city sales tax. The city has no control over the development or growth policies of military installations within its boundaries. Changes in funding levels, congressional policy, and the level of military activity all influence the stability of Aurora's economy.

The estimated labor force of Aurora increased from 28,800 in 1970 to 57,740 in 1974. This increase was due to several factors: population growth, growth of the proportion of the working population, and an increase of regional employment. Another factor influencing the increase in working population is the number of small families without children leaving both spouses free to work.

Within 20 minutes driving time from this development are two major shopping centers, Buckingham Square and the Aurora Mall. Both of these centers may be sources of primary or secondary employment. Other employment centers include Stapleton Airport, easily accessible via highway I-225 Greenwood Plaza, the Denver Technological Center, and other large office complexes which also serve as employment centers for residents.

The Aurora Chamber of Commerce is seeking to raise $30,000 to match an equal amount of city funds in an effort to stimulate long anticipated industrial development. The city and Chamber of Commerce have jointly formed Explore Commercial Opportunities in Aurora, or ECO-AURORA. The main purpose of this push to attract new industry is to broaden the city's tax base. The city spent about $2 million in 1973 developing industrial land in the northeast area of the city, in Adams County (Denver Post, November 17, 1976). A three-year multi-million dollar industrial development gamble began to pay off for Aurora with the groundbreaking for a new hydraulic hammer plant that will provide "hundreds" of new jobs. The Joy Manufacturing Company located at East 37th Avenue and Wheeling Street will produce giant hydraulic hammers to be used in mining operations (Denver Post, November 12, 1976).

Employment will be available for many on the development site during the construction phases.

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CHERRY CREEK SCHOOLS
LOCATION MAP
(No Scale)

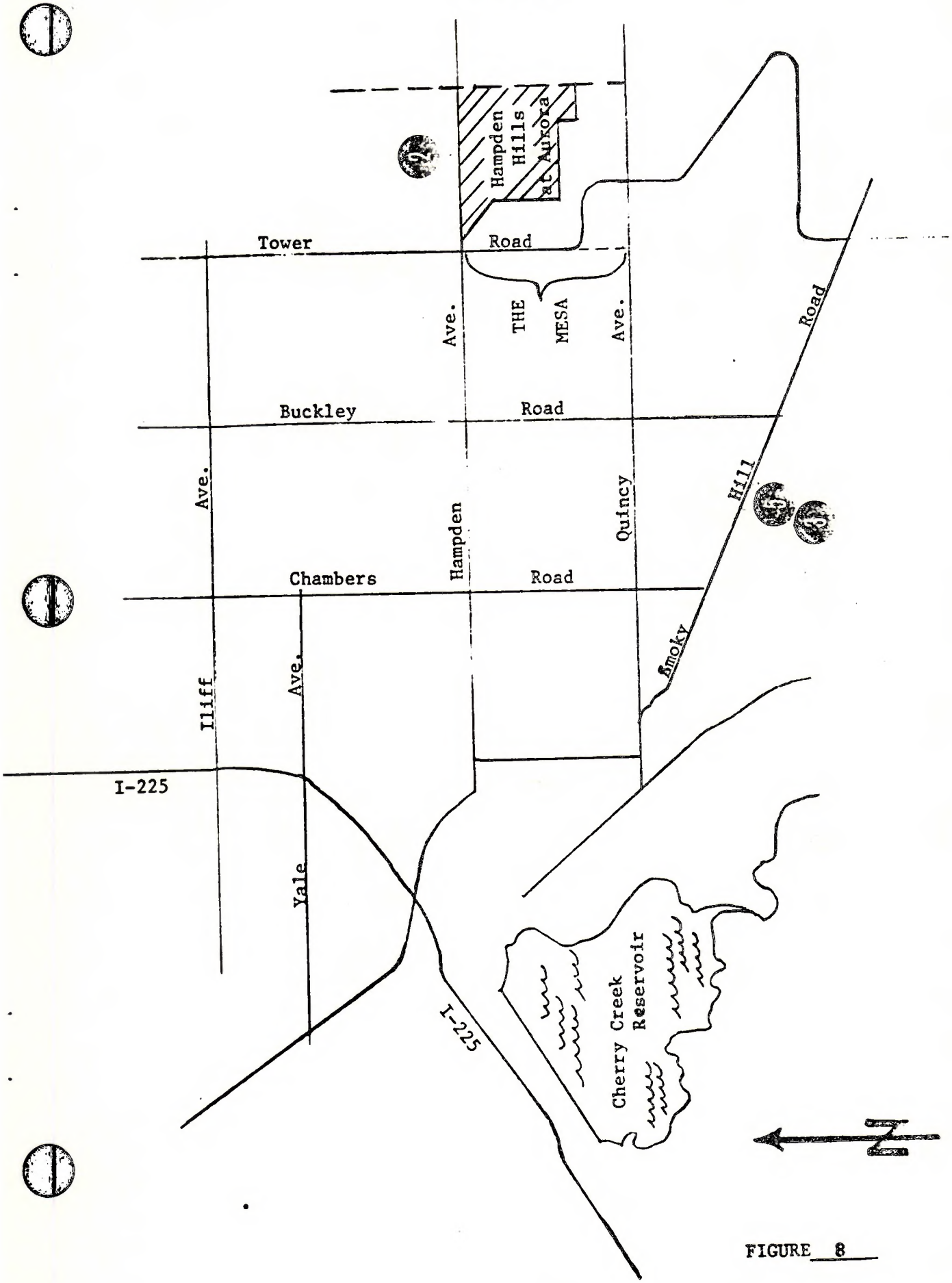


FIGURE 8

HIGHER EDUCAT IN
DENVER METRO AREA

TABLE 6

AME	TYPE	ADDRESS	ENROLLMENT	DEGREES	MAP VICINITY NUMI
hoe Community College	State	5900 S. Sante Fe Driv	5,900	Associate	15
nity College of Denver	State	Auraria Campus-1111 W. Colfax	3,976	Associate	1
nity College of Denver	State	North-Campus 3645 W. 112th Ave.	4,731	Associate	3
nity College of Denver	State	Red Rocks Campus-12600 W. 6th Ave.	5,719	Associate	2
politan State College	State	Auraria Campus-1006 11th Ave.	13,637	4 Year	1
ado School of Mines	State	1500 Illinois (Golden)	2,381	Engineering	14
rsity of Colorado(Boulder)	State	Broadway (Boulder)	21,000	Up to Doctorate	4
rsity of Colorado(Denver)	State	1100 14th (Denver)	8,225	Up to Doctorate	1
rsity of Colorado-Medical Center	State	4200 E. 9th Ave. (Denver)	1,477	RN, DDS, MD	9
tto Heights College	Private	3001 S. Federal Blvd.	850	Liberal Arts 4 Years	18
s College	Parochial	W. 50th Ave. & Lowell Blvd.	998	4 Year	7
rado Women's College	Private	Montview Blvd. & Quebec	400	4 Year	10
er University	Private	2199 S. University Blvd.	7,753	Up to Doctorate	8
Air Force Academy	Federal	Colorado Springs, Colorado	4,417	4 Year	6

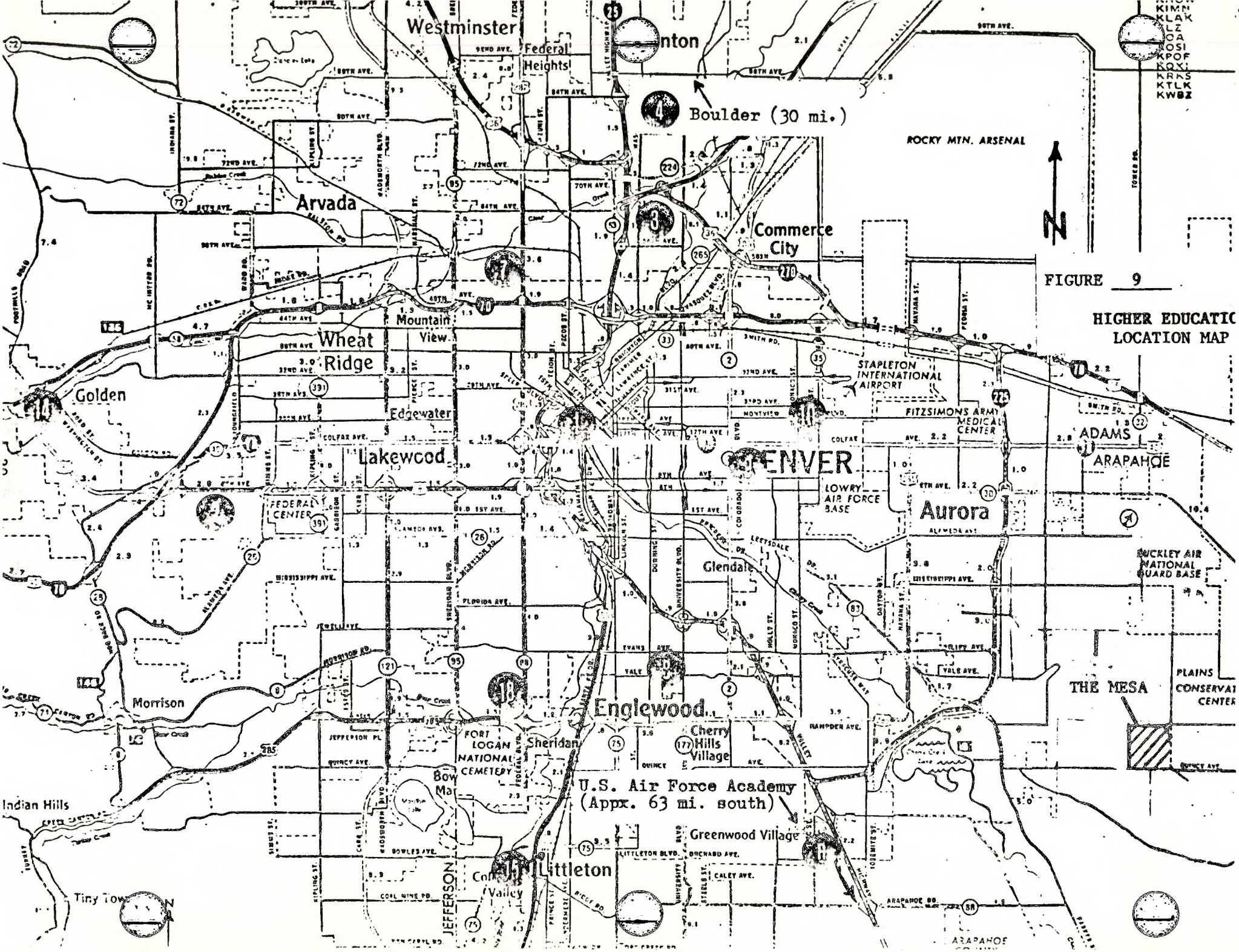


FIGURE 9

HIGHER EDUCATIC
LOCATION MAP

5. RECREATION

Hampden Hills at Aurora has set aside within the property boundaries 37.5 areas to be developed as school and park facilities; also there is an area of greenbelt/flood plain land which may be used for recreational purposes. Aurora Parks and Recreation will be responsible for parks and recreational facilities in this area. These will be provided as the need calls for and as funding becomes available.

Cherry Creek Reservoir State Recreation Area is located approximately four miles west of Hampden Hills at Aurora. This state recreation area has facilities for boating, water skiing, a beach for swimming, picnicing and fishing. There are also trails for horseback riding, hiking, and there is a rifle range. Cherry Creek Reservoir is a favorite spot for many. The reservoir's water surface is the most widely used facility. During the summer on vacation days this area is sometimes filled to capacity, causing gate limits to be imposed. This recreation site is within 10 minutes driving time from Hampden Hills at Aurora (Varnell Roberts, Principle Landscape Architect, Aurora Parks and Recreation, Interview: November 14, 1977).

The Plains Conservation Center covering three square miles and sponsored by the West Arapahoe Soil Conservation District is north and east of the northeast corner of Hampden Hills at Aurora. This adjacent recreation area features a native plant preserve, a wild animal preserve, a wild bird sanctuary, seven miles of interpretive trails, an outdoor theatre, a one-room sod school house, and a furnished two-room sod house.

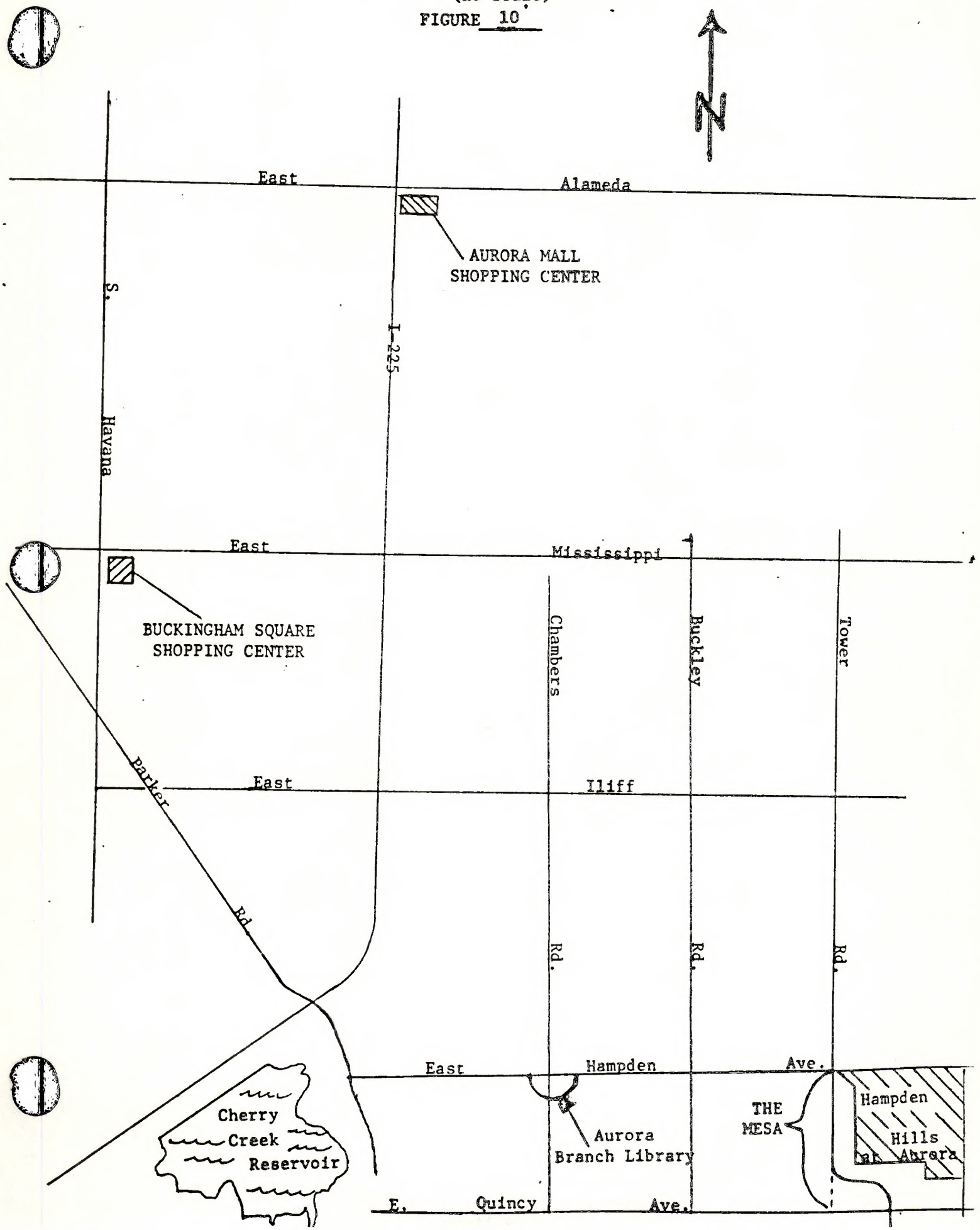
Two new state recreation areas opened in the summer of 1977, Barr Lake, approximately 20 miles northeast of Denver, and Chatfield Reservoir, about three miles southwest of Littleton. These two recreation areas will help relieve the influx to Cherry Creek Reservoir. (Alan Everson, Comprehensive Planner, Colorado Parks and Recreation, Telephone conversation on April 27, 1977).

6. COMMUNITY FACILITIES

Shopping Facilities

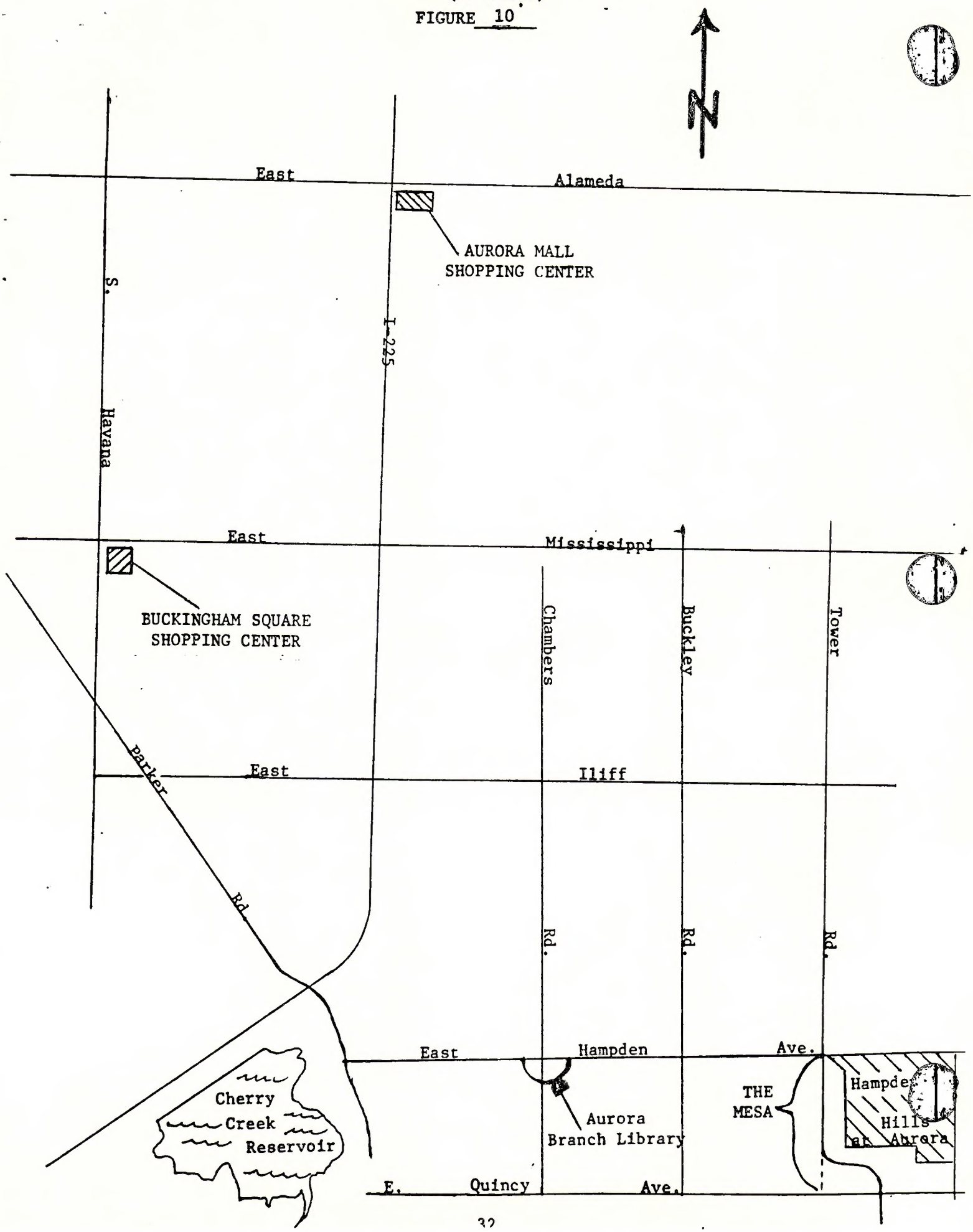
From Hampden Hills at Aurora in southeast Aurora there are two regional enclosed shopping centers within 25 minutes driving time. Located immediately south and east of the intersection of South Havana and East Mississippi Avenue is Buckingham Square Shopping Center. Here there are 111 stores and businesses. This shopping site covers 17.22 acres with ample free parking adjacent. Major tenants include Joslins, Montgomery Ward, Woolworth, and Safeway. (Dave Stephenson, General Manager, Telephone conversation on March 22, 1977).

SHOPPING CENTERS IN AURORA
(no scale)
FIGURE 10



SHOPPING CENTERS IN AURORA
(no scale)

FIGURE 10



Aurora Mall Shopping Center, located at 14200 East Alameda Avenue east of I-225, contains 120 stores and businesses within about 27 acres of commercial area. Some of the major tenants are Sears & Roebuck, May D & F, the Denver and J. C. Penney. (Maurine Wilks, Secretary for the Manager, Telephone conversation on April 4, 1978).

The master plan Hampden Hills at Aurora development shows 10.0 acres at the northwest corner is to be developed for commercial shopping. West of the Hampden Hills at Aurora development about one and one half miles on the north side of Hampden Avenue are several businesses including a supermarket and several smaller stores.

Libraries

Aurora has two libraries available for public use. The Main Library, located at 1296 Dexter Street has [illegible] square feet of space. Here there are 96,503 volumes. The [illegible] Library at 15324 East Hampden Circle is [illegible] square feet of space containing 24,346 volumes. [illegible] libraries in Aurora also have sculptures and other art works that may be checked out. In addition to these facilities, the Aurora Public Library has two bookmobiles with 5,[illegible] volumes each. This service is available at Arrowhead Elementary School every other Saturday afternoon for 3 1/2 hours. (Thomas Nichols, Librarian I, Telephone conversation on June 5, 1978). Aurora Public Library has an agreement with libraries throughout the metropolitan area which allows card holders to request books from any library in the metro area when not immediately available in Aurora Libraries. (Mrs. Bulla, Reference Librarian, March 30, 1977).

Cultural Facilities

There are many museums, art galleries, and other cultural facilities in the Denver metro area within an hour's drive of Aurora. The Museum of Natural History in Denver City Park depicts the animal, plant, and mineral parts of Colorado's region. Historical beginnings as well as current phenomena are shown. The United States Mint is located at Cherokee Street and West Colfax, Colorado State Capitol at East Colfax and Lincoln Street, Molly Brown House National Landmark at 1340 Pennsylvania Avenue. All are within ten minutes of each other near downtown Denver. The culture of early Colorado is preserved and much has been restored in Central City and Blackhawk on Highway 119 just thirty-four miles west of Denver. This gold mining region was known as the richest square mile on earth back in the 1860's-1880's. For additional cultural and service facilities refer to Table 8. Refer to Figure 11 for their location from Hampden Hills at Aurora.

TABLE 8

CULTURAL AND SERVICE FACILITIES

NAME OF FACILITIES	LOCATION	MAP VICINITY NUMBER	PHONE NUMBER
Colorado State Capitol	East Colfax and Lincoln Street	*	892-2161
United States Mint	West Colfax Avenue and Cherokee	2	837-3582
Art Museum	100 West 14th Avenue Parkway	2	297-2793
Schlire Gallery	1343 Acoma Street	2	297-2793
Molly Brown House	1340 Pennsylvania Avenue	4	832-1421
Currigan Exhibition Hall	14th Avenue and Champa Street	5	297-2637
Auditorium Theatre and Arena	13th Avenue and Curtis Street	5	297-2637
Museum of Natural History	City Park	6	399-0870
Gates Planetarium	City Park	6	388-4201
City Park Zoo	East 23rd Avenue and Steele Street	6	297-2754
Phipps Auditorium	Colorado Boulevard at Montview	6	333-3949
Coliseum	East 46th Avenue and Humbolt	7	297-2637
Mile High Stadium	2800 West 20th Avenue	8	297-5850
Mc Nichols Sports Arena	1635 Clay Street	8	297-2547
Botanic Gardens	1005 York Street	10	297-2547
Red Rocks Amphitheater	Appx. 2 miles north of Morrison	11	297-2637
Buffalo Bill's Grave & Museum	Look-out Mountain	12	277-0747
Central City - Black Hawk	34 miles west of Denver, Highway 6, to Highway 119.	13	-0-

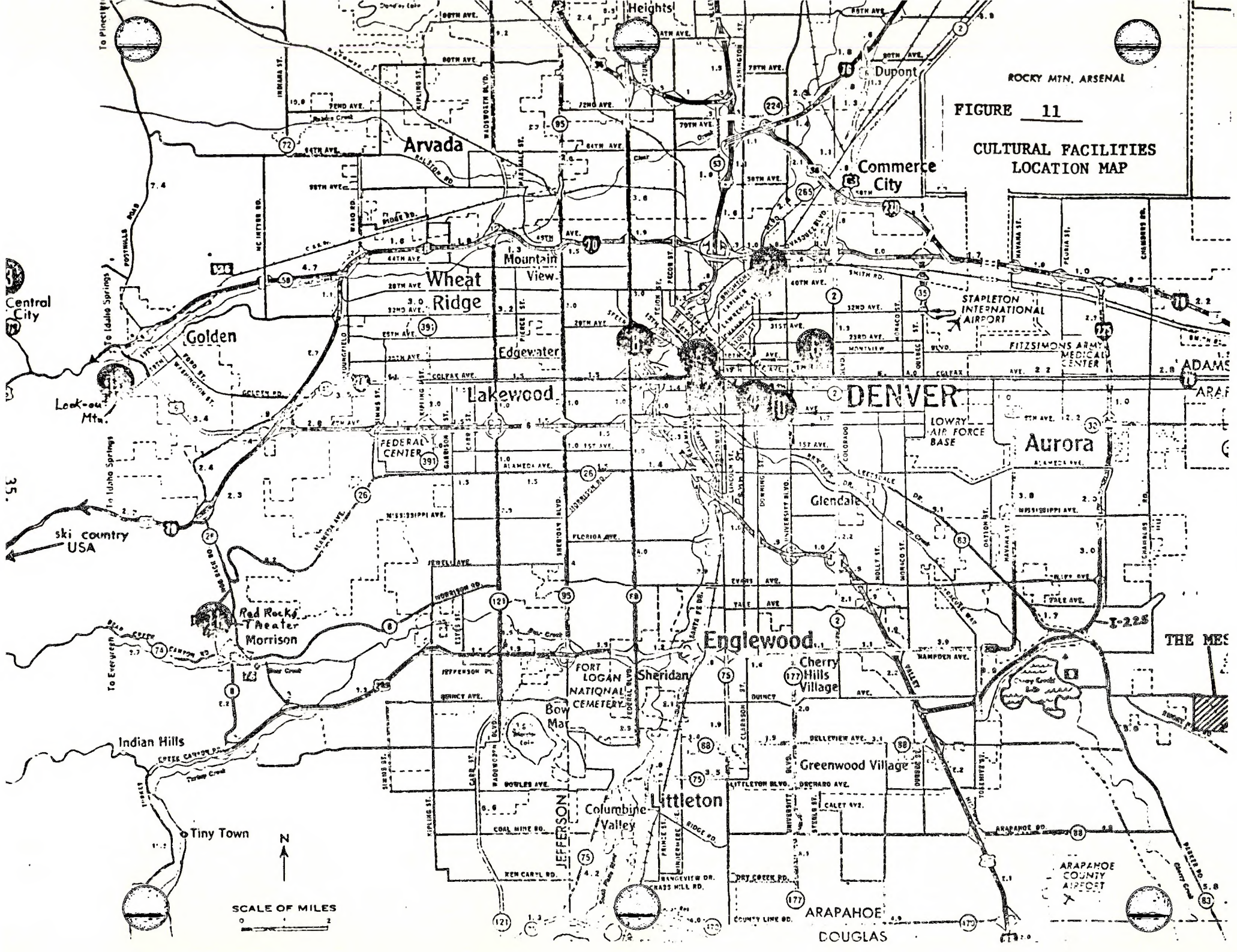


FIGURE 11
CULTURAL FACILITIES LOCATION MAP
ROCKY MTN. ARSENAL
Heights
Dupont
Arvada
Commerce City
Wheat Ridge
Mountain View
Central City
Golden
Edgewater
Lakewood
DENVER
STAPLETON INTERNATIONAL AIRPORT
FITZSIMONS ARMY MEDICAL CENTER
LOWRY AIR FORCE BASE
Aurora
Glendale
Look-out Mtn.
FEDERAL CENTER
ski country USA
Red Rocks Theater
Morrison
Englewood
Cherry Hills Village
Sheridan
FORT LOGAN NATIONAL CEMETERY
Bow Mar
Indian Hills
Greenwood Village
Littleton
Columbine Valley
Tiny Town
JEFFERSON
ARAPAHOE COUNTY AIRPORT
ARAPAHOE
DOUGLAS
I-225
N
SCALE OF MILES

7. SOCIAL SERVICES

The Arapahoe County Department of Social Services is the major provider of general social services for Hampden Hills at Aurora. Services which are provided include Aid to Dependent Children, Aid to Dependent Children-Unemployed Parent, Work Incentive Program, Aid to the Blind, Aid to the Needy Disabled, Child Welfare, Tuberculosis Assistance, General Assistance, Old Age Pension, Homemakers, Foster Family Care, Group Care, Adoption Services, Medicaid, and various volunteer services. The Arapahoe County Social Services office is located at 5606 South Court Place. There is also a food stamp office in Aurora at 1553 Clinton Street which is administered by the state with a 20 percent contribution from Arapahoe County.

At 14500 East 14th Place in Aurora is a social services branch office where services are administered with help given by church groups. Here need to provide foster homes for needy children is urgent. (Mrs. Aida Downey, Supervisor of Services Office, Telephone conversation on April 5, 1978).

Brad Robinson, Director of Arapahoe County Social Services, stated in a telephone conversation on April 5, 1978, that the department is overloaded with cases and cannot meet present needs. The situation is worsening steadily with insufficient funding from the state making it impossible to provide adequate services.

8. HEALTH SERVICES

There are three hospitals in Aurora: Aurora Community Hospital just southwest of the intersection of Interstate 225 and East Mississippi Avenue, Aurora Presbyterian Medical Center southwest of the intersection of Interstate 225 and East 6th Avenue, and Fitzsimons Army Medical Center at Peoria Street and Montview Boulevard. Fitzsimons is for the care of veterans and military personnel only. Both civilian hospitals are new to Aurora and opened within the past three years. Before that time Aurora residents had to rely on the hospitals in Denver which have an average occupancy rate of 77.1 percent. Both Aurora civilian hospitals are full service hospitals with 24-hour emergency care and a combined total of 334 beds. (Ron Horton, Principal Health Finder, Colorado State Health Department, Telephone conversation on April 5, 1978).

As of March 1977 Aurora Presbyterian was operating with an occupancy rate of 62 percent and Aurora Community had a 50 percent rate. An optimum occupancy rate is considered to be 80 to 85 percent (Denver Area Wide Comprehensive Health Planning Council, March 1975). Aurora also has four Nursing Homes which provide care for the elderly. There are 58 practicing medical doctors and 56 dentists in Aurora.

HOSPITALS IN AURORA

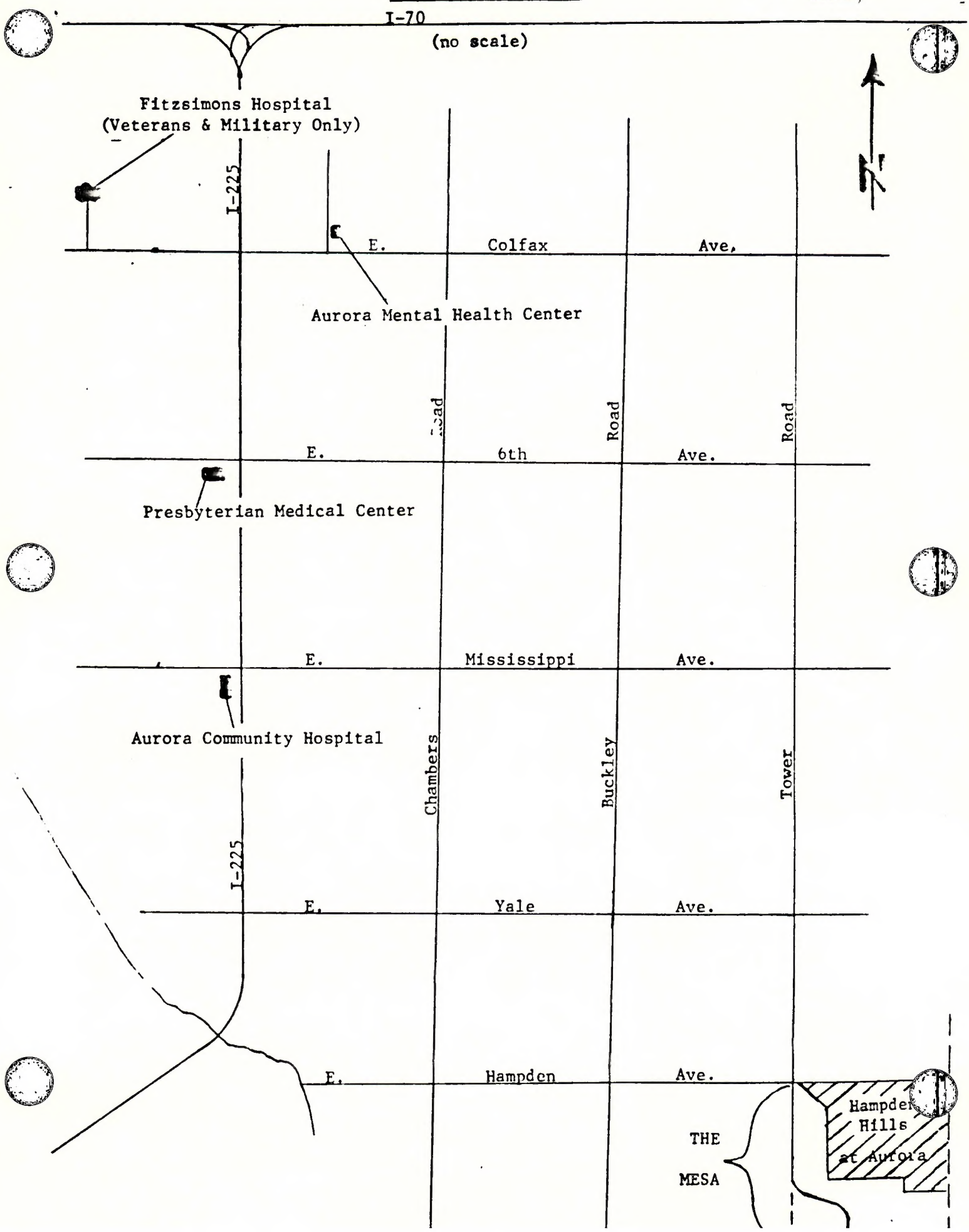
TABLE 9

NAME	TYPE	LOCATION	CAPACITY	OCCUPANCY RATI
Fitzsimons (Veterans and Military Personnel Only)	General	North of East Colfax Avenue, between Peoria and Potomac		
Aurora Community	General	East Mississippi Avenue and Interstate 225	200 Beds	50%
Presbyterian Medical Center	General	East 6th Avenue and Interstate 225	134 Beds	62%

Source: State Health Department by Telephone Conversation

HOSPITALS IN AURORA

FIGURE 12



The Aurora Mental Health Center at 1650 Altura offers outpatient services, emergency services, and consultation and education for community agencies. Letters of affiliation have been signed with Fort Logan, Colorado Psychiatric Hospital, and Adams County Mental Health to provide in-patient psychiatric services. The staff initially includes a 3/4 time psychiatrist, one full time psychologist, one part time psychologist/executive director, two psychiatric social workers, one psychiatric nurse, four mental health workers, and support staff. They anticipate a case load of about 600 in their first year. In an interview with HUD, Dr. Miles Edwards, Director of the Aurora Mental Health Center, stated that the center will be operating at a minimum level of adequacy due to limited staff and community resources. See Table 9 and Figure 12 for Aurora Health Facilities data and locations.

Public Health services are run by the Tri-County District Health Department, a health agency covering Adams, Arapahoe, and Douglas Counties. This agency provides services related to community health surveillance, environmental health, health care, nursing, and statistical recording and analysis. Presently routine public health services response time is from immediate to a one month waiting period depending upon the type of request. This service is adequate at present.

Reed Ambulance located at 4017 East Arkansas is the major ambulance service to Aurora. Response time to Hampden Hills at Aurora is about 10 to 15 minutes in an emergency. (Marge Caddy, Dispatcher, Telephone conversation on April 7, 1978).

9. PUBLIC SAFETY SERVICES

a. Police

Hampden Hills at Aurora will receive their police protection from the Aurora Police Department currently located at 9801 East 16th Avenue. This department's new address will be 15000 East Alameda Avenue effective in about October 1978.

Police Beat #17 is manned full time by one officer patrolling this area. If manpower is low this beat is one of the first to be vacated. In this case, officers from surrounding beats respond to service calls. In an emergency situation response time city wide is 6.1 minutes. Normal response time to Hampden Hills at Aurora is 30.0 minutes. The overall Police/Population ratio in Aurora is 1.36 police/1,000 population. (Caren Pemberton, Criminal Justice Planner, Letter: February 23, 1978)

b. Fire

The vicinity of Hampden Hills at Aurora in southeast Aurora is protected by two fire stations; Station #6 is located at 15588 East Hampden Circle with one 1,500 G.P.M. (gallons per minute) pumper truck, one ladder truck, and eight men on duty per shift; Station #7 located at 2290 South Blackhawk also has one 1,500 G.P.M. pumper, one ladder truck, and six men on duty per shift plus a rescue squad consisting of one Paramedic and one E.M.T. (Emergency Medical Technician). The ladder trucks have 85 foot rear mount aerials. In the affected area of southeast Aurora there are two additional projected stations. Station #8 is planned for April 1978 and will have one pumper truck, a rescue squad, and six men on duty per shift. Station #9 planned for October, 1978 will have one pumper with four men on duty per shift.

At the present time Station #6 has a response time of six minutes to Seven Lakes just north of this project. Station #7 has a response time of approximately nine minutes. The addition of Station #8 and #9 will not effect these response times. Aurora has an I.S.O. rating of four. (John W. Speed, Fire Chief, Letter: November 18, 1977)

10. CULTURAL RESOURCES

Properties which are included in or eligible for inlcusion in the National Register of Historic Places are afforded a degree of protection from adverse impacts resulting from Federal undertakings. This protection is provided under the National Historic Preservation Act of 1966 and Executive Order 11593, "Protection and Enhancement of the Cultural Environment". The Advisory Council on Historic Preservation, which was established by the 1966 Act, has developed procedures for Federal agencies to follow in order to comply with the Act and Executive Order. These "Procedures for Protection of Historical and Cultural Properties" were published in the Federal Register of January 25, 1974, (39 FR 336) and were codified in 36 CFR Part 800.

The Advisory Council Procedures require that the head of every Federal agency having responsibilities for an undertaking must identify properties located within the the area of the undertaking's potential environmental impact which are included in or eligible for inclusion in the National Register. To identify properties for inclusion in the National Register, the Agency Official must in consultation with the State Historic Preservation Officer, apply the National Register Criteria to all properties possessing historical, architectural, archaeological, or cultural value located within the area of the undertaking's potential environmental impact. For any property included in eligible for inclusion in the National Register of Historic Places, the agency head, must in consultation with the State Historic Preservation Officer, determine the probable effect which may result from the proposed undertaking. If an effect is found, the Advisory Council on Historic Preservation must be afforded an opportunity to comment.

The State Historical Society has determined that no archaeological or historic sites are recorded within the project's impact area. HUD has complied with the "Procedures for Protection of Historical and Cultural Properties" through the following actions:

1. HUD has inspected the proposed housing site and has not identified any historic or archaeological properties.

2. Contact with the State Historic Preservation Officer did not reveal any recorded properties.

CHAPTER II

PROBABLE IMPACTS OF THE PROPOSED ACTION

A. Natural Environment

1. CLIMATE

There will not be a significant impact on the area's climate caused by this project.

Lack of precipitation during the winter months creates a drying condition which aggrevates fugitive dust levels. Effects of the winds should be considered in designing dwelling units, orientation of building to minimize drifting of snow, and use of planting and building orientation to minimize chill factors as related to heating requirements.

2. GEOMORPHOLOGY, GEOLOGY AND SOILS

The project is planned in an area containing a deposit of some lignite coal, a low-rank form, 250 feet below the surface. Development here should not cause an adverse affect on this coal seam since its extraction is most unfeasibl .

Further analysis of data received indicates that geologic conditions in the area should not have an adverse impact on this development if proper engineering is used. There are no known areas of major subsidence, undermining, or landslides. Some of the ground area has high bedrock formations as indicated by soil investigations, this could cause some excavation problems during development. The Mesa is the highest land in the vicinity where many small drainage swales and gullies begin.

Soil conditions vary at the site, but with proper engineering development there should not be an adverse impact on the proposed housing. These soils used in the past for agricultural purposes, are not considered prime farm land by the U.S. Soil Conservation Service; therefore, changing it from agricultural to urban use is not a significant impact.

The U.S. Soil Conservation Service has indicated that erosion and sediment control is needed on the site during construction. They consider the soils are susceptible to wind and water erosion and suggest native vegetation be maintained as long as possible to avoid a tendency for soil damage.

3. FLOODING

HUD requires that the development be built to handle the 100 year storm without damage. Consideration has been given to the limits of the 100 year storm relative to the master development plan of The Mesa.

The probable maximum flood is the runoff caused by the possible maximum precipitation. The probability of flooding due to the possible maximum precipitation can best be stated in terms of the storm frequency of 1 in 1,000 years. This condition is dependent upon the intensity of the storm. The outflow from such a storm would be down and away from THE MESA.

4. PLANT AND ANIMAL COMMUNITIES

The native vegetation and wildlife of the area will be radically impacted by the construction of this subdivision. However, HUD considers these changes to be the normal type of trade-offs consistent with subdivision development. The impacts caused by the vegetation and wildlife on the development is not considered significant. The only impact by wildlife on the development that could be significant is the potential for deer-vehicle accidents; however, the Aurora Police Department and the Colorado Humane Society indicated that this impact will not have a frequent occurrence. If a problem with deer-vehicle accidents does develop it can be mitigated by fencing and signs.

The Colorado Division of Wildlife has expressed concern for wildlife being molested by maranding dogs and recommends dog tight fencing and strictly enforced leash ordinances as control measures for this problem.

No endangered species (plant or animal) have been identified in this development area.

HUD agrees with the U.S. Soil Conservation Service that whenever possible native vegetation should be preserved and left in an existing state. This native vegetation serves as feeding, nesting, and breeding areas for birds and other wildlife. Some native vegetation will remain through the 37.5 acres which has been set aside for school and park facilities plus the greenbelt/flood plain land.

B. Man-Made Environment

1. WATER SUPPLY AND SEWERAGE

Information received in an interview with Charles Wemlinger, Utilities Director, on November 14, 1977 and in a letter from Aram M. Sarkisian, Utilities Coordinator, February 17, 1978, indicates that adequate water and sewage services can be supplied to The Mesa (Hampden Hills at Aurora) without difficulty.

2. SOLID WASTE DISPOSAL

Recent studies indicate that alternative methods need to be developed at a regional level to accomodate solid waste disposal and refuse in the Denver metro area. Until such time as alternative methods become economically feasible, landfills will remain the most commonly used method of disposal. The Lowry Bombing Range Landfill site as noted in Champter I will serve as an adequate place for disposal to accomodate this development. Minimal impact will be experienced from disposal generated by this project.

3. TRANSPORTATION

Traffic arising from this development is only a very small percentage of that in the total Denver metro area. The light impact felt on traffic originating from this development, according to the City of Aurora, Traffic Engineer, will be an increase of about 254,080 VMT (vehicle miles traveled) daily. This figure includes service, delivery, emergency, and passenger vehicles; using 3,176 total dwelling units X 10 trips per day, per unit X 8 miles per trip (Environmental Quality Division, HUD Regional Office).

RTD is the major source of public transportation in the metro area and will extend service further as the demand increases.

The impact on facilities such as bus lines, railroads, and airlines is expected to be minimal.

4. STORM DRAINAGE

Runoff from the development will increase due to the added ground cover at the site. A drainage study and preliminary plan was completed by Tri-Consultants Inc., and approved by Stephen B. Reams, Engineer.

5. RESIDENTIAL ENERGY USE

All living units built in Hampden Hills at Aurora will have R-11 insulation in exterior walls, R-30 in ceilings, and thermopane windows. Since all units to be built here will comply with and even exceed HUD/FHA standards the impact on energy consumption from this development is expected to be at an acceptable level.

The waiting time from application to allocation for gas taps is presently about one year. As this development uses more gas this waiting period will lengthen. (Darrel Morehead, Consumer Service Representative, Public Service of Colorado, Telephone conversation on January 19, 1978).

6. AIR QUALITY

The Denver-Metro Air Quality Control Region (AQCR) is currently in violation of the Federal standard of 35 PPM (Parts Per Million) for carbon monoxide during eight hours exposure. Ozone and carbon particulates have concentrations in the Denver AQCR that violate the Federal standards most of the time. Weather conditions help determine the level of air pollution. The addition of 254,080 VMT (vehicle miles traveled) daily generated from The Mesa will worsen an already serious problem.

7. NOISE

The impact of the development on the environment will be greatest during the phases of construction. After completion the noise impact from this development will be that of normal residential areas and within the normally acceptable range. Noise from aircraft, railway, and roadways will not adversely affect any of the single family residences in The Mesa. Multi-family units adjacent to Hampden Avenue will be adversely effected and will require noise mitigation for roadway traffic.

8. MAN-MADE HAZARDS

The liquified gas pipeline is a potential adverse impact to some of the residents of Hampden Hills of Aurora that would be in close proximity to it. HUD's requirement in regard to liquified gas pipelines are addressed in Chapter VIII.

C. Social Environment

1. DEMOGRAPHY

The increase in population from this development is not expected to change the demographic trends described in Chapter I, but will contribute to them. This increase will impact the area to a minimal extent.

2. HOUSING

The Mesa (Hampden Hills at Aurora) will provide additional housing to Aurora's and Arapahoe county's housing stock. Dwelling units planned here will not provide housing for low and moderate income persons.

3. ECONOMY AND EMPLOYMENT

This development will create impacts on Aurora's economy in several ways. The new population will cause an increased demand on services, health facilities, schools, recreation, and all other aspects of community living. The increased consumption and demand caused by growth means more jobs will become available to help meet this growth. It has not been determined if Aurora's and Arapahoe County's benefit from taxes, commercial transactions, creation of service oriented jobs, and other secondary economic stimulation resulting from the development will be sufficient to offset necessary capital improvements and service costs.

4. EDUCATION

Cherry Creek Schools serving this area will assume educating responsibilities for an anticipated 1,129 students; composed of 632 elementary, 181 junior high, and 316 senior high. These students expected from Hampden Hills at Aurora will impact the school district with a total cost of $3,793,500 plus $36,158.40 for busing costs. (See letter from Cherry Creek Schools, Appendix D). Although the Cherry Creek School District anticipates difficulties in serving these students adequate service will be provided.

5. RECREATION

The impact on recreational facilities in the vicinity will increase as the development grows, but facilities are adequate to serve this development. A park is planned to be built adjacent to and in conjunction with the school site at Hampden Hills at Aurora. The developers of The Mesa anticipate donating land to the city that will be developed as recreational facilities when the need arises and when funds are available.

6. COMMUNITY FACILITIES

a. Shopping Facilities

Since there are two regional enclosed shopping centers within about 20 minutes driving time form this site and smaller stores just 1 1/2 miles west, as described in Chapter I, shopping is adequate. Impact from this development will be beneficial to stores, especially to those smaller stores nearby.

b. Libraries

The Aurora Branch Library at 15324 East Hampden is the nearest to The Mesa. No significant impact is expected here or on the bookmobile servicing this area.

c. Cultural Facilities

Residents of this planned subdivision are not expected to create a significant impact on cultural facilities.

7. SOCIAL SERVICES

These services are provided by the Arapahoe County Social Services Department. An impact from any development in this county will overburden the department that is already overloaded. Because of insufficient funding adequate services cannot be provided. (Brad Robinson, Director, Telephone conversation on May 5, 1978).

8. HEALTH SERVICES

Impact expected from this development can be adequately handled by hospitals, doctors, and dentists in the area.

The Tri-County District Health Department can furnish adequate services for this subdivision provided sufficient funds are provided by the counties. (Dr. Johnson, Department Director, Telephone conversation on May 3, 1978).

Mental health services provided by the Aurora Mental Health Center are inadequate and understaffed due to insufficient funding. (Dr. Miles Edwards, Director, Telephone conversation on May 5, 1978).

9. PUBLIC SAFETY SERVICES

a. Police

The Aurora Police Department can adequately provide police service to The Mesa.

b. Fire

The City of Aurora Fire Department can adequately provide protective services for The Mesa from Stations #6 and #7. Two additional stations are projected in the affected area. (Wanda Blackwood, Administrative Aid, Fire Department, Letter: November 21, 1977).

10. CULTURAL RESOURCES

No known historical, architectural, or archaeological properties are within the probable impact area of The Mesa. Therefore no impact will be experienced.

CHAPTER III

ALTERNATIVES TO THE PROPOSED ACTION

As stated in the Introduction, this Environmental Impact Statement will form one input into the decision making process to determine if the Department of Housing and Urban Development, as a result of the subdivision analysis, should find the subdivision acceptable to issue mortgage insurance on individual properties. Thus, the alternatives for which this Environmental Impact Statement has an input are:

1. To accept the development as proposed.
2. Not to accept the development.
3. To accept the development with recommended modifications.

Consequently, the purpose of this Environmental Impact Statement is not to select the best project alternative from several, but to examine the impacts of the subdivision on the natural, man-made, social, and cultural environments, and to recommend mitigative action for adverse impacts should such action be necessary.

At this stage the area under consideration is zoned by the City of Aurora as PCZD, Planned Community Zoned District. Alternative means of designing and implementing the proposed project which has been considered or still could be considered are discussed in Chapter IV as means of mitigating anticipated significant environmental impacts identified in Chapter II.

CHAPTER IV

UNAVOIDABLE ADVERSE IMPACTS

All of the impacts noted as significant in Chapter II, have been carried to this chapter. HUD is aware of instances exceeding both State and Federal standards. Situations like this HUD will include in this chapter, even when authority for any primary action is beyond the department's control.

GEOMORPHOLOGY, GEOLOGY AND SOILS:

Impact from the development can be expected in the area of wind blown sand and soil, and some water erosion due to land stripping during construction. Natural vegetation should be left undisturbed as long as possible. Areas bared should be reseeded to help reduce damage from erosive forces.

AIR QUALITY:

The air at this southwest corner of Aurora at the present time is probably clearly acceptable for two reasons; (1) vicinity is relatively undeveloped with light traffic and (2) the majority of seasonal winds from the south and southwest blowing pollutants away from this vicinity. The addition of 254,080 VMT will worsen air quality of the metro area and especially in Aurora.

To help hold down the amount of interdevelopment vehicular traffic the developer should inform the Regional Transportation District (RTD) of the development plans to enable busing routes to conform with needs generated by the new populace.

Walkways and bicycle trails should be provided throughout the development site to provide alternate methods of mobility and to reduce automobile trips.

Convenience stores should be planned within walking distance.

The developer should consult the Colorado State Health Department concerning methods to reduce fugitive dust during construction.

SOCIAL SERVICES:

The Arapahoe County Social Services Department serving this area is operating at over capacity level now. An increased caseload can be expected from a development of this size.

MENTAL HEALTH:

An increased caseload in an already filled beyond capacity department in Aurora will cause an onerous impact.

EDUCATION:

An increased high school enrollment of 316 generated from Hampden Hills at Aurora will impact Smoky Hill High already operating at an over capacity level.

CHAPTER V

RELATIONSHIP BETWEEN SHORT-TERM USES OF MAN'S ENVIRONMENT AND LONG TERM PRODUCTIVITY

Increases in noise levels, fugitive dust, ground erosion, and traffic of heavy trucks will occur during construction of The Mesa (Hampden Hills at Aurora).

The major long term product of this subdivision is housing stock which will increase that available in southeast Aurora.

The predominant long term impact stemming from this development will be the commitment of the local and regional governmental and service units to provide services to The Mesa (Hampden Hills at Aurora) and the necessary resultant secondary and tertiary effects of that commitment. These effects include, but are not limited to, creation of water supplies and delivery systems, increased use of natural gas reserves, increased electrical generating facilities, creation of alternative funding methods for providing adequate educational systems, and responsive social and mental health services. This subdivision also extends urban sprawl of low density, single family construction in the Aurora suburban area and the accompanying commercial and service development. Thereby, there is a further commitment for future generations to extend the aforementioned services over an increased geographical area.

Costs of extending and providing these services is thought to be offset to some extent by the additional tax base generated and the increased assessed valuation of the various service units. At the same time, the development as planned does answer the desire of many of today's buyers for housing removed from the more crowded central city.

CHAPTER VI

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES LIKELY TO RESULT FROM IMPLEMENTATION OF THE PROPOSED PROJECT

Construction of this subdivision will conform with the pattern of suburban sprawl in southeast Aurora. As this planned development is built, agricultural land will be converted to residential housing with domestic vegetation. Materials used in the construction of roads, houses, and all resources consumed will be a loss for any other purpose.

Demands of this development on physical and social services has been discussed previously in other chapters. Each represents irreversible and irretrievable commitments of various resources to service, operate, and maintain the proposed housing units. Such resources include, but are not limited to water, natural gas, electricity, capital, lumber, gravel, land, labor, etc.

There will be a long term commitment of Federal mortgage insurance, the insuance of mortgage insurance on individual homes in this subdivision should HUD decide to accept or not to accept with recommended modifications.

CHAPTER VIII

RECOMMENDED HUD ACTION ON THE PROPOSAL

To better understand the decision that HUD must make following the EIS process, the reader should be aware of the purpose and effect of this decision. The decision will be the result of Subdivision Analysis in which HUD has been requested to issue a favorable feasibility determination for mortgage insurance on individual homes. The EIS process is one of the elements of Subdivision Analysis and is intended to assure that the disclosing and weighing of environmental consequences will be considered along with the feasibility considerations.

A favorable feasibility determination resulting from Subdivision Analysis is helpful to home buyers in their efforts to obtain financing for the purchase of a dwelling unit. The buyer has the option of purchasing the unit by means of a Federally insured loan or a conventional loan. The Federally insured loan usually permits more favorable financing. If a subdivision does not receive a favorable feasibility determination from HUD, this may or may not have any effect upon the construction of this project. The degree to which HUD disapproval of the subdivision affects construction will vary from proposal to proposal, and cannot be accurately measured prior to a disapproval decision.

The true control of the construction of housing is vested in local government through zoning regulations, building permits and infrastructure development. If a control over the construction of homes is necessary, this is the appropriate level of government to take such action.

In the EIS process, an agency's discussion of the balance between environmental degradation and economic development is often a controversial issue. Because each Federal agency and special interest group is responsible for carrying out a different mission, various agencies and special interest groups differ on the importance of certain environmental factors and, therefore, differ on the proper decision regarding a particular proposal.

Based on the environmental impacts identified in this Draft EIS, and the above rationale, HUD proposes to approve the proposal as described here with the following special conditions:

1. Each individual residential foundation shall be designed by a registered professional engineer. The engineer shall determine how the swelling soil conditions might affect foundation stability due to the high ground water table. If the ground water will affect the foundation, then an adequate drainage system shall be designed and installed.

2. Any subsequent filings that contain residential sites adjacent to Hampden Avenue or Tower Road will be subjected to noise evaluation setbacks as shown on Figure 6 in Chapter I. Sites found not to be in compliance with HUD standards will be subject to noise attenuation measures as follows:

   a. Sound barriers of sufficient height so that noise exposure shall neither exceed 65 dB(A) for more than 8 hours in any one 24-hour period, nor exceed 80 dB(A) for 60 minutes per 24 hours, or

   b. Establishment of building setback distances such as that the sound levels at the property line meet the above attenuation requirements.

   In addition, sleeping quarters shall be located such that interior noise levels resulting from exterior noise sources and interior building sources such as heating, plumbing, and air conditioning do not exceed the following:

   a. 55 dB(A) for more than an accumulation of 60 minutes in any 24-hour period, and

   b. 45 dB(A) for more than 30 minutes during night time sleeping hours from 11 p.m. to 7 a.m., and

   c. 45 dB(A) for more than an accumulation of 8 hours in any 24-hour period.

   Attached dwelling units and multi-family structures shall have a minimum Sound Transmission Class (STC) of 45 between dividing wall and floors.

3. LOCATIONS NEAR HIGH PRESSURE GAS AND LIQUID PETROLEUM TRANSPORTATION PIPELINES. No part of any residential structure shall be located less than ten feet from the outer boundary of the pipeline easement of high pressure gas and liquid petroleum transmission lines. When new construction, or subdivision land planning, is proposed in areas outside the above ten foot limit, but within an area that extends 220 yards on either side of the centerline of such high pressure transmission line, the developer shall be required to comply with the following procedure prior to HUD acceptance of applications for commitment on individual properties and prior to the approval of such subdivision.

   a. The Developer must provide HUD with a statement from an authorized official of the pipeline company certifying compliance with each of the following paragraphs of Title 49, "Transportation," of the Code of Federal Reglations.

(1) 192.607 - Initial determination of class location and confirmation or establishment of maximum allowable operating pressure.

(2) 192.609 - Required study for change in class location.

(3) 192.611 - Change in class location: Confirmation or revision of maximum allowable operating pressure.

(4) 192.613 - Continuing surveillance practices (Identification and operating methods used by survey team).

b. Pipeline Companies maintain records of the above per agreement with the Department of Transportation as recorded in Federal Register, Volume 35, Number 161 dated August 19, 1970 which has been previously distributed to all field offices.

c. The Above Statements obtained by the developer shall be retained in the subdivision file.

4. HUD will also require to the greate[illegible] extent possible local governmental and developers' efforts to reduce adverse impacts beyond direct HUD control, such as mentioned with Air Quality in Chapter IV.

a. Builders and developers shall notify the Regional Transportation District as to the development plans so that implementation to coordinate busing plans in the region will be most practical.

b. In the planning stages provision shall be made for adequate bus circulation, travel, stops, and pick-up points in the development.

c. Walkways and bike paths will be integrated with schools, parks, convenience stores, and activity centers to help eliminate auto trips generated by this type of daily activities.

d. A fugitive dust permit shall be obtained from the State Health Department to help control the dust problem in the most effective manner during construction phases and also to minimize the disturbed acreage.

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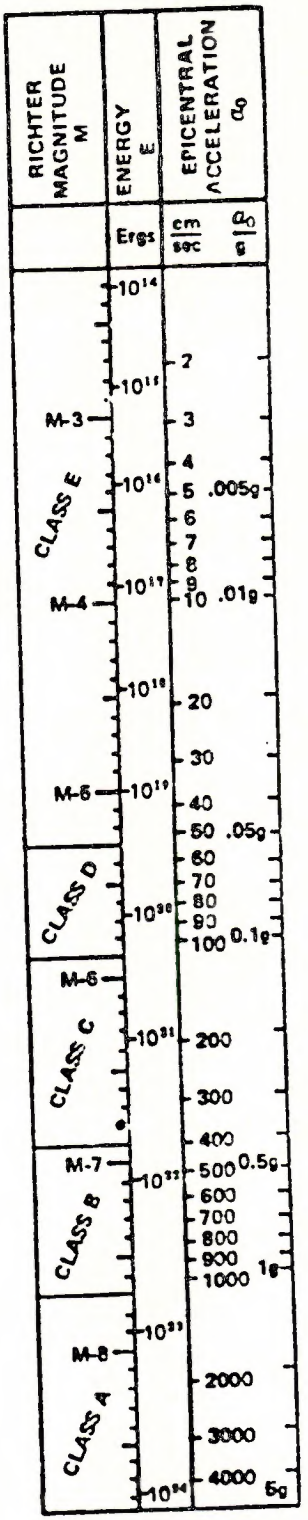
APPENDIX A

MERCALLI INTENSITY AND RICHTER MAGNITUDE SCALES

(adapted from Nuclear Reactors and Earthquakes, USAEC, TID-7024, August 1963, pp. 13 & 14)

	MODIFIED-MERCALLI INTENSITY SCALE (1931)
I	Detected only by sensitive instruments.
II	Felt by a few persons at rest, especially on upper floors; delicate suspended objects may swing.
III	Felt noticeably indoors, but not always recognized as a quake; standing autos rock slightly, vibration like passing truck.
IV	Felt indoors by many, outdoors by a few; at night some awaken; dishes, windows, doors disturbed; motor cars rock noticeably.
V	Felt by most people; some breakage of dishes, windows, and plaster; disturbance of tall objects.
VI	Felt by all; many frightened and run outdoors; falling plaster and chimneys; damage small.
* VII	Everybody runs outdoors; damage to buildings varies, depending on quality of construction; noticed by drivers of autos.
VIII	Panel walls thrown out of frames; fall of walls, monuments, chimneys; sand and mud ejected; drivers of autos disturbed.
IX	Buildings shifted off foundations, cracked, thrown out of plumb; ground cracked; underground pipes broken.
X	Most masonry and frame structures destroyed; ground cracked; rails bent; landslides.
XI	Few structures remain standing; bridges destroyed; fissures in ground; pipes broken; landslides; rails bent.
XII	Damage total; waves seen on ground surface; lines of sight and level distorted; objects thrown up into air.



UD&FCD URBAN DRAINAGE AND FLOOD CONTROL DISTRICT

L. Scott Tucker, Executive Director

utive Committee:

James J. Richey
City of Lakewood
Wally Toevs
Boulder County
Cathy Reynolds
City of Denver
Vi June
City of Westminster
John J. Nicholl
Arapahoe County
[illegible]
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Jefferson County
James Covey
Adams County
David A. Day
Engineer
W. G. Duncan
Douglas County
Fred H. Hood
City of Aurora
Kenneth M. MacIntosh
City of Denver
William H. McNichols
City of Denver
Arlen E. Patton
Engineer
M.L. "Sam" Sandos
City of Denver
Walter P. Spader
City of Broomfield

2460 W. 26TH AVENUE • SUITE 156 B • DENVER, COLORADO 80211 • TELEPHONE 455-6277

November 28, 1977

Mr. Howard S. Kutzer
Environmental Clearance Officer,
Department of Housing and
Urban Development
Insuring Office
Title Building
909 - 17th Street
Denver, Colorado 80202

Dear Mr. Kutzer:

This letter is in response to your request for information concerning drainage facilities in the area of the development called "Hampden Hills." We are not aware of any existing drainage facilities other than the natural topography. We are not aware of any drainage studies or defined flood plains for this site, and we have no current plans to do any work in this area.

Sincerely,

Bill DeGroot

Bill DeGroot
Chief, Flood Plain
Management Program

WGD/bac

(APPENDIX C)

STATE OF COLORADO
Richard D. Lamm, Governor
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WILDLIFE
Jack R. Grieb, Director
6060 Broadway
Denver, Colorado 80216 (825-1192)

December 1, 1977

TO: Philip H. Schmuck, Director
Colorado Clearinghouse

FROM: Jack R. Grieb, Director
Colorado Division of Wildlife

SUBJECT: Hampden Hills Housing Development
Department of Housing and Urban Development

This memo is in response for comments upon the proposed Hampden Hills development in Aurora, Colorado.

The proposed project lies at the east edge of a traditional mule deer migration route. However, this location is not anticipated to impact migrating deer.

Hampden Hills also coincides with regularly occupied winter deer range. Winter deer populations, although not great in this area, are substantially greater than the few residents present throughout other seasons.

Songbirds, raptors, and rodents will be displaced by the development. Loss of rodents will also serve to reduce the food supply for raptors. Prairie-type songbirds such as horned and meadow larks and lark buntings will have to move elsewhere.

Free-roaming dogs that are now troublesome in molesting livestock will present an even bigger problem to deer. The reason for this is that declining livestock ranching via housing development, or other land use change, will cause a shift by maranding dogs to hunt native prey, including deer. As a consequence then, dog-tight enclosure fencing and strictly enforced leash ordinances are recommended measures for controlling unrestrained dogs.

Thank you for the opportunity to comment on this housing development.

JRG:cs
cc: Evans
Bogart
Moser
Rottman

RECEIVED
DEC 7 1977
DIV. OF PLANNING

CHERRY CREEK SCHOOLS

REF'D. TO_____

Office of the Superintendent and the Board of Education
4700 South Yosemite Street
Englewood, Colorado 80110
(303) 771-1184

773

December 9, 1977

Mr. Howard S. Kutzer
Environmental Clearance Officer
Department of Housing and Urban Development
Title Building, 909 17th Street
Denver, Colorado 80202

RE: Hampden Hills Development Proposal

Dear Mr. Kutzer:

Enclosed is the analysis requested by your office for the Hampden Hills development. Should you have any questions regarding the information, please call at your earliest convenience.

Sincerely,

Thomas S. Crawford, Ed.D
Assistant Superintendent

TSC:pjp

to service the development (until 1979-1980 school year)

1. Grades K through 6 will attend the Arrowhead Elementary School, located at 19100 East Bates Avenue in Aurora, Colorado. The school is within the Seven Hills development to the north of Hampden Hills (Twp .1975 Sec. 34).

2. Grades 7 and 8 will attend the Laredo Middle School, located at 5000 South Laredo Street in Aurora. The school is a part of the Smoky Hill High School campus.

3. Grades 9-12 will attend Smoky Hill High School, located at 16100 East Smoky Hill Road in Aurora. The high school campus is located east of the Shenandoah development and south of Smoky Hill Road. (Twp .2073 Sec. 8).

B. Capacity and Projected Enrollments

	Capacity	Enrollment		
		1977	1978	1979
Arrowhead	599	152	450	750
Laredo	1000	537	535	700
Smoky Hill	2250	2379	2600	*

* Cannot be determined due to expected revision of High School boundaries.

C. Projected Student Population - Costs to the District

According to the general plan for the Mesa, of which Hampden Hills is part, the Alpert Corporation project will account for:

660 Single Family Dwellings
1098 Multiple Family Dwellings
366 Cluster Single Family Dwellings
2124 Total Dwellings

Expected student populations are as follows:

660 SF x 1.1 students/unit = 726 school age children
1098 MF x .2 students/unit = 220 school age children
366 cluster x .5 " " = 183 school age children
TOTAL 1129 children

These students are expected to be grouped accordingly:

K-6	632	56%
7-8	181	16%
9-12	316	28%

TOTAL - 1129

These percentages are based upon Districtwide distributors for the 1977-1978 school year.

Cost to the District

Construction of an elementary school within this development is suggested. Additionally, middle and high school students will fill currently available space in existing facilities and contribute to the need for construction of additional facilities. Using generalized cost per student figures, it is possible to estimate construction costs attributable to Hampden Hills.

Elementary	$3000 per student
Middle	$3500 per student
High	$4000 per student

632 K-6 students x $3,000 per student = $1,896,000
7-8 students x $3,500 per student = 633,500
9-12 students x $4,000 per student = 1,264,000

TOTAL COST - $3,793,500

In addition, until such time as schools can be built closer to or within the development, the District will incur the cost of bussing students to respective schools. Those costs are computed as follows:

632 K-6 students will be bussed 3 miles per day, round trip
497 7-12 students will be bussed 11 miles per day, round trip

A bus holds 44 secondary children or 66 elementary children, therefore, at the elementary level, a minimum of 10 busses will be necessary. At the secondary level, a minimum of 12 busses are needed. A generalized cost for District bussing is $1.24 per mile traveled. Accordingly, costs of bussing at full development will be:

10 elementary busses x 3 miles x 1.24 per mile x 180 days
12 secondary busses x 11 miles x 1.24 per mile x 180 days

Elementary = $ 6,696.00 per year
Secondary = 29,462.40 per year

TOTAL - $36,158.40 per year

his cost will of course be lower at first as the development begins, and then will increase incrementally over time as saturation is reached. Assuming an 8 year project schedule and equal yearly student impacts, the cost of bussing (in 1977 dollars) would be as follows:

1978	1979	1980	1981	1982	1983	1984	1985
4,519.80	9,039.60	13,559.40	18,079.20	22,599.00	27,110.80	31,638.60	36,158.40

Inflation could elevate these costs to in excess of $50,000 by 1985.

In that the District is not required by law to provide transportation and is further committed to holding down the cost of transportation, any cost increase could mean cutbacks in educational programming, staff, equipment or areas served by busses.

D. Sites for School Purposes

For this analysis, we must examine the entire section's development proposal as public land donation was considered in this context. The District accepted a 7 acre parcel in the western portion of the development as it related to a 4 acre parcel donated by the Witkin Company in the Summer Valley development.

According to guidelines used by the City of Aurora, the School District should have received a set aside of 4% of the land in one section for school purposes. In the Mesa case, this would amount to 25 acres. In that the District accepted 7 acres to the west, 18 acres are necessary in the Hampden Hills section of the development. There are dedicated 26 acres for public use including parks. The City usually takes 66% of land for itself, meaning in the Alpert case, 17 acres, leaving the District with but 9 acres. The District stated to the City that the Alpert site dedication was acceptable only if 18 acres were made available to it. The City remains uncommitted to the agreement.

Should the 18 acre and 7 acre land areas be committed, the District would have the option of one elementary and a middle school or possible two elementary schools and a middle school within this development. Should the City leave us with but 16 acres, we would be hardpressed to meet the demand created without substantial expenditure of funds for additional land purchase.

It would appear, at this time, that improvement of either site for an elementary school is three (3) to five (5) years in the future. A middle school would be from five (5) to ten (10) years in the future.

E. School Policy

Present school district policy relative to eligibility for transportation is as follows: elementary school - 1 mile from school of attendance and secondary school - 1½ miles from school of attendance. The District has utilized year round schools (45-15 plan) to alleviate overcrowding at the elementary and middle schools but only upon favorable vote of the parents involved. At the present, three elementary schools and one middle school are utilizing the plan. Double and triple sessions have not been utilized within the District because of unfavorable attitudes of the residents to such less-than-desirable alternatives. The high school within this impact area is already on a 40% extended day.

F. Bond Capabilities

Since January of 1970, the following bond issues have passed:

a.	May 12, 1970	$6,800,000	
	For	1,240	67%
	Against	607	33%
b.	May 9, 1972	$20,000,000	
	For	2,543	66%
	Against	1,314	34%
c.	March 11, 1975	$15,000,000	
	For	2,138	61%
	Against	1,362	39%
d.	May 25, 1976	$26,800,000	
	For	2,582	56%
	Against	2,015	44%

TOTAL DEBT AUTHORIZED $68,600.00

Cherry Creek is presently at its legal debt limit, which is 20% of assessed valuation. The District needs to pay off bonds and/or increased assessed value in order to have new capacity. Projections suggest a limited bond package (2 or 3 elementary schools and 1 middle school - 8 to 10 million dollars) may be viable late in 1978 or early in 1979. Passage of this program (not guaranteed) would mean the elementary relief space could not possibly be available prior to September of 1979 and most likely later. Observation of the above data indicates a trend exhibiting serious doubts for passage of additional capital construction authorization.

G. Alternative Methods for Funding

Alternative methods of funding capital construction range from developers constructing buildings and donating them to the District (feasibility - zero) to a lease-purchase program (feasible but financially restrictive). The District is exploring other alternatives but is not in a position to comment at this time except to say that implementation of any of the alternatives presently under study would take three years or more.

H. District Policy on Annexation

Most annexations are occurring adjacent to the City of Aurora. The land to be annexed is vacant and zoning is determined to complete annexation procedures. The District would very much like to be involved in the assessment of social impacts of the annexation proposal and subsequent determination of school needs. The City of Aurora however, does not consider schools as an essential public service but as a separate public entity. This lack of understanding of the planning process makes it very difficult for the School District to meet the needs of prospective residents of annexed land areas.

The District is supportive of the model annexation agreement developed by the City which made certain demands upon land owners seeking annexation. One of these was the 12% public land donation with 4% to schools. If adjustments made in percentages could result in a committment to pay cash-in-lieu of land which would assist the District in obtaining lands elsewhere to serve its constituents in Aurora.

CITY OF AURORA
COLORADO

Municipal Building

PARKS AND RECREATION • 1470 S. HAVANA 80012 • TELEPHONE 750-5000

November 21, 1977

Mr. Howard S. Kutzer
Environmental Clearance Officer
HUD
Insuring Office
Title Building 909 - 17th Street
Denver, Colorado 80202

Re: 8.1U

Dear Mr. Kutzer:

I am writing to you relative to your letter of November 9, 1977 concerning EIS for Hampden Hills Subdivision. City of Aurora's policy requires 8 per cent of the total area to be dedicated to the city for park purposes. This would provide approximately 24 acres will be retained in open space. In our opinion, this amount of acreage will be satisfactory to properly serve the residents of the area. In addition, there is a large regional park (Quincy Reservoir) located one-half mile southwest of Hampden Hills. The area contains 350 acres and should be opened for public use within the next three to five years.

The city's master plan calls for the location of a neighborhood swimming pool. The site has not definitely been located but should be within one mile of the Hampden Hills site. There currently exists a recreation center approximately two miles west, located at the intersection of Laredo and Dartmouth Streets. A series of bicycle trails will be located along all major arterial streets within Hampden Hills, which will connect to a major bicycle trail system.

The developer is responsible for no other fees other than those mentioned above. User fees will be charged for some recreation programs offered by the city. The city currently boasts over 800 different recreational activities offered to the public on a year-round basis. Once the park sites are developed within Hampden Hills, they will be maintained at the same standards as are presently being followed in other parks within the city.

I trust this information will be what you have asked for. However, if you have further comments, please do not hesitate to contact me.

Sincerely,

BSWaldo

Bruce S. Waldo, Director
Parks, Recreation and Public Properties

BSW:cms

(APPENDIX F)

Public Service Company of Colorado

Southeast Metro Division
1470 S. Havana St., Suite 500
Aurora, Colorado 80012

November 28, 1977

Mr. Howard Kutzer
Department of Housing
and Urban Development
Title Building
909 17th St.
Denver, Colorado 80202

Dear Mr. Kutzer:

In regards to your questions for service to the subdivision known as Hampden Hills, we have prepared the following.

The major supplier of gas and electricity to this subdivision will be Public Service Company of Colorado.

In reference to the availability of electricity - an application for electric service may be made at any office of the Company. The Company may require any applicant to sign an Application Contract before service is supplied. However, the use of electric service constitutes an agreement under which the user receives electric service and agrees to pay the Company therefor in accordance with the applicable rate schedules, rules and regulations. The benefits and obligations of the agreement for service may not be assigned without written consent of the Company. A separate agreement will be made for each class of service at each separate location. We will provide cost estimates for a distribution system as soon as we receive plats and load design data from the developers.

The availability of natural gas will depend upon future supplies being available. At the present time, we have a waiting list for residential and commercial customers. The developer must make application deposits and remain on our temporary waiting list. As soon as we have sufficient supplies of natural gas available we will issue commitments. From the time we issue the committed taps, the developer will have one year in which to have the homes enclosed and ready to utilize natural gas. Our Gas Attachment Scheduling program is on file with the Public Utilities Commission and available upon your request.

Our systems both gas and electricity will be designed to meet your peak demands. It is imperative that we receive load data along with a comprehensive layout that defines residential and commercial development to occur within your project.

The service area currently being served by Public Service Company includes the Denver Metropolitan area, and many small communities throughout Colorado.

PUBLIC SERVICE COMPANY OF COLORADO

The final notation in regards to plans for expansion are on file with the Public Utilities Commission with respect to service territory. We will provide service in accordance with the rates, rules and regulations on file with the Colorado Public Utility Commission.

If we can be of further assistance, please feel free to contact our office.

Sincerely,

E. R. McEwen, Manager
Customer/Consumer Services

ERM/c

List of Contacts

Listed as they appear in statement:

John L. Reuss, Acting Chief, Intermountain Field Operations, U.S. Department of the Interior, Bureau of Mines, Letter: December 9, 1977.

Al Hazel, Director of Radiation and Hazardous Materials, Colorado State Health Department, Telephone conversation on December 27, 1977.

Bill De Groot, Chief, Flood Plain Management Program, Letter: November 28, 1977.

Bud Hart, Plant Manager, Kuiper Treatment Plant, Interview: January 4, 1978.

Charles Wemlinger, Director of Utilities, Interview: November 14, 1977.

Tom Griswold, Water Resource Engineer, Telephone conversation on January 6, 1978.

Bob Genty, Inspector, Telephone conversation on January 6, 1978.

Roger Hickok, Vice President-Marketing/Crane Homes, Telephone conversation on March 8, 1978.

Nicki Stoner, Planner, Telephone conversation on February 6, 1978.

Thomas S. Crawford, Assistant Superintendent, Letter: December 9, 1977.

Varnell Roberts, Principal Landscape Architect, Aurora Parks and Recreation, Interview: November 14, 1977.

Alan Everson, Comprehensive Planner, Colorado Parks and Recreation, Telephone conversation on April 27, 1977.

Dave Stephenson, General Manager, Telephone conversation on March 22, 1977.

Maurine Wilks, Secretary for the Manager, Telephone conversation on April 4, 1978.

Thomas Nicholas, Librarian 1, Telephone conversation on June 5, 1978.

Mrs. Dulla, Reference Librarian, Telephone conversation on March 30, 1977.

Mrs. Aida Downey, Supervisor of Services Office, Telephone conversation on April 5, 1978.

Brad Robinson, Director of Arapahoe County Social Services, Telephone conversation on April 5, 1978.

Dr. Miles Edwards, Director of Aurora Mental Health Department, Telephone conversation on April 7, 1978.

Marge Caddy, Dispatcher-Reed Ambulance, Telephone conversation on April 4, 1978.

Caren Pemberton, Criminal Justice Planner, Letter: February 23, 1978.

John W. Speed, Fire Chief, Letter: November 18, 1977.

Aram M. Sarkisian, Utilities Coordinator, Letter: February 17, 1978.

Ted Denisuk, Engineering Assistant, Telephone conversation on March 21, 1978.

Scott Miller, Public Health Engineer, Colorado Health Department, March 16, 1978.

Darrell Morehead, Consumer Service Representative, Public Service of Colorado, Telephone conversation on January 1[illegible], 1978.

Dr. Johnson, Department Director-Tri County District Health Department, Telephone conversation on May 3, 1978.

Jim Richardson, Assistant to the City Manager, Telephone conversation on May 3, 1978.